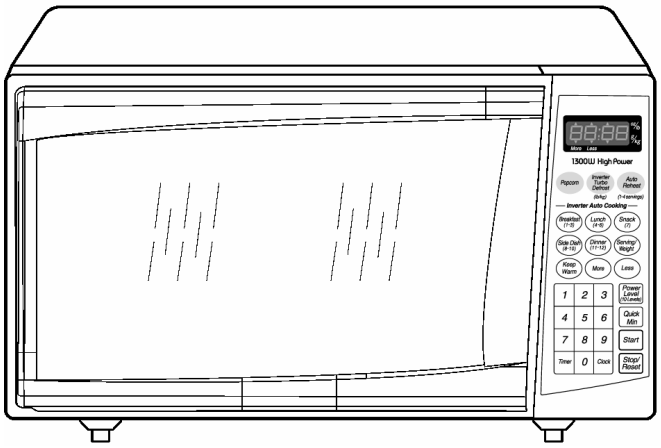
ORDER NO.PHAMOS0701001A7
E1

Service Manual

Microwave Oven

NN-SD697S
NN-SD677S
NN-SD667S
NN-SN677S
NN-SN667
NN-SN657S
NN-SA647
NN-ST677S
NN-ST657W



APH(USA)

CPH(CANADA)

RPH(MEXICO/LATIN AMERICAN)

Specifications:

Model: / Specifications:	SD697S APH	SD677S CPH SN667B CPH SN667W CPH	SD667S APH	SN677S APH	SN667B APH SN667W APH SN667BB APH SN667WB APH SN667MB APH	SN657S APH	ST677S RPH ST677S RTH	ST657W RPH ST657W RTH	SA647B APH SA647W APH
Power Source:	120V AC Single Phase, 60Hz								
Power Requirement:	1480W	1480W	1480W	1480W	1480W	1480W	1480W	1480W	1480W
Output:	1300W	1200W	1300W	1300W	1300W	1300W	1250W	1250W	1300W
Microwave Frequency:	2450MHz								
Timer:	30 min. / Stage (HIGH Power) ~ 5 Stage Maximum 90 min. 00 sec or 99 min. 99 sec / Stage (Other Power Levels) ~ 5 Stage Maximum								
Outside Dimensions: (W) X (D) X (H)	20 3/8"(W) X 15 15/16"(D) X 11 7/8"(H) 518mm(W) x 404mm(D) x 301mm(H)								20 3/8"(W) X 15 7/8"(D) X 11 7/8"(H) 518mm(W) x 402mm(D) x 301mm(H)
Oven Cavity Dimensions:	14 3/4"(W) X 15 3/16"(D) X 8 7/8"(H) 375mm(W) x 386mm(D) x 225mm(H)								
Oven Cavity Dimensions:	1.2 cu. ft.								
Weight:	Approx. 26 lbs./11.8 kg								Approx. 24 lbs./11 kg
PbF	This product with PbF								
Specifications subject to change without notice.									

Panasonic®

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

WARNING

1. This product should be serviced only by trained, qualified personnel.
2. Though this product has been manufactured in compliance with:
   "Federal Performance Standard 21 CFR Subchapter J"(D.H.H.S): U.S.A. models
   or "Radiation Emitting Devices Act"(Health and Welfare Canada): Canadian models
   it is very important all repairs should be made in accordance with procedures described in this manual to avoid being exposed to excessive microwave radiation.
3. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakage."
4. If the unit cannot be repaired on site, advise the customer not to use until unit is repaired.
5. Any serviceman who learns of any accident pertaining to microwave radiation leakage including the oven operating with open door should immediately notify the appropriate address listed below and Center for Devices and Radiological Health, DHHS.

IN U.S.A. (PSTC)	Panasonic Services Company 50 Meadowland Parkway, Secaucus, New Jersey 07094 Attention: Technical Service Division. (201)348-7000	IN PUERTO RICO (PSC)	PSC San Gabriel Industrial Park 65th Infantry Ave. Km.9.5 Carolina, Puerto Rico 00985 (787)750-4300
		IN CANADA (PCI)	Panasonic Canada Inc. 5770 Ambler Drive, Mississauga, Ontario, L4W2T3 (905)624-5010

6. There are special components used in the microwave oven which are important for safety. These parts are marked with a ⚠ on the replacement parts list. It is essential that these critical parts should be replaced only with the manufacture's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the orginal design.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(A) Do not operate or allow the oven to be operated with the door open.
(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
   (1) Interlock operation
   (2) Proper door closing
   (3) Seal and sealing surfaces (arcing, wear, and other damage)
   (4) Damage to or loosening of hinges and latches.
   (5) Evidence of dropping or abuse
(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.
(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
(E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

CAUTION

About lead free solder (PbF)

Distinction of PbF PCB: PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

Caution:
- Pb free solder has a higher melting point than standard solder; Typically the melting point is 30 - 40˚C higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 370 ± 10˚C.
- Pb free solder will tend to splash when heated too high (about 600˚C).

DANGER OF HIGH VOLTAGE AND HIGH TEMPERATURE (HOT/LIVE) OF THE INVERTER POWER SUPPLY (U)

INVERTER WARNING

This Inverter board looks like a regular PCB. However, this PCB drives the magnetron tube with extremely high voltage and high current. **NEW H.V.**

IT HAS:

1. **Very high voltage and high current circuits.**
   It functions the same as the high voltage transformer and high voltage capacitor in ordinary microwave ovens.
2. **Aluminum heat sink that is energized with very high voltage and high heat energy.**
3. **Very high voltage which may remain in circuitry even when oven is off. High voltage charge may remain in the capacitors on the board.**

DO NOT:

* 1. **Do not touch circuitry because it has very hot (high voltage) circuitry. Even when replacing board, extreme care should be taken to avoid possible electric shock hazards. High voltage charge may remain in circuits.**

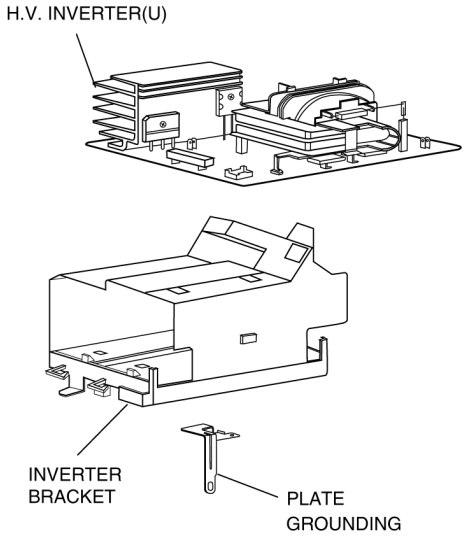
* 2. **Do not touch aluminum heat sink because it is energized with very high voltage and is also very hot in high heat energy.**

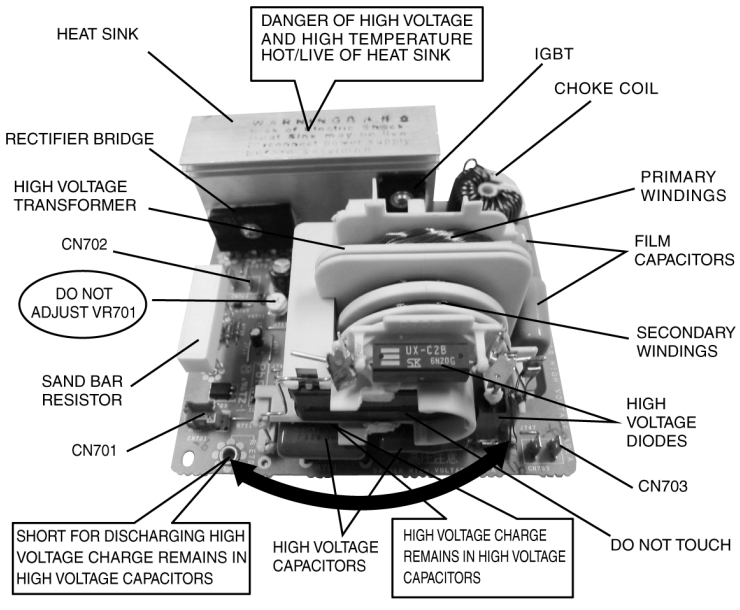
* 3. **Do not try to adjust or tamper with preset control on the Inverter board because it is very dangerous to adjust without proper test equipment.**

* 4. **Do not test oven while Inverter grounding plate or screws are loose. It is very dangerous to operate H.V. Inverter Circuit (U) with loose mounting screws or if improperly grounded.**

* 5. **For USA only:**
   Do not try to repair Inverter PCB because it is very dangerous to repair. Replace as a complete High Voltage Inverter Circuit unit and return fully re-packed in original shipping box and shipping materials.

INVERTER POWER SUPPLY





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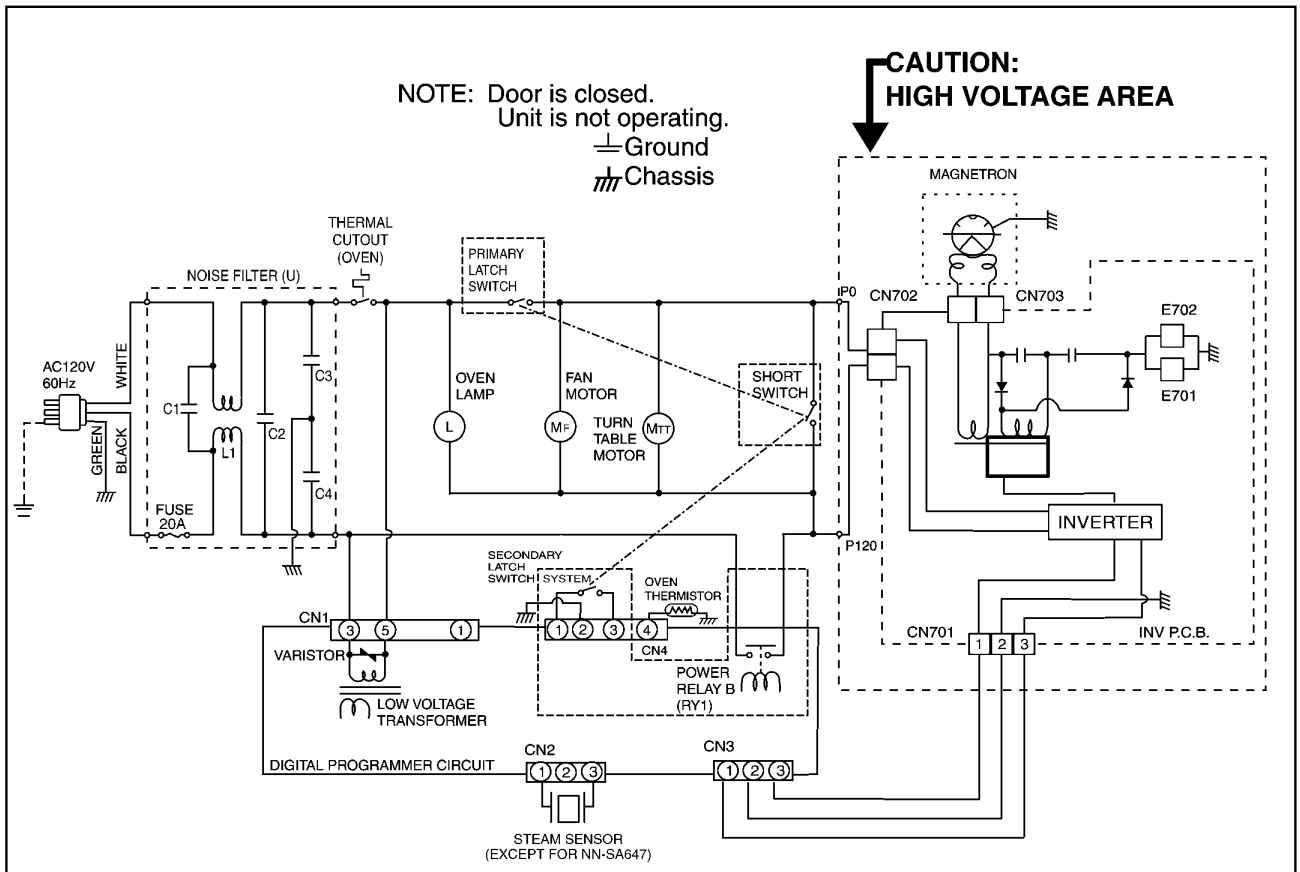
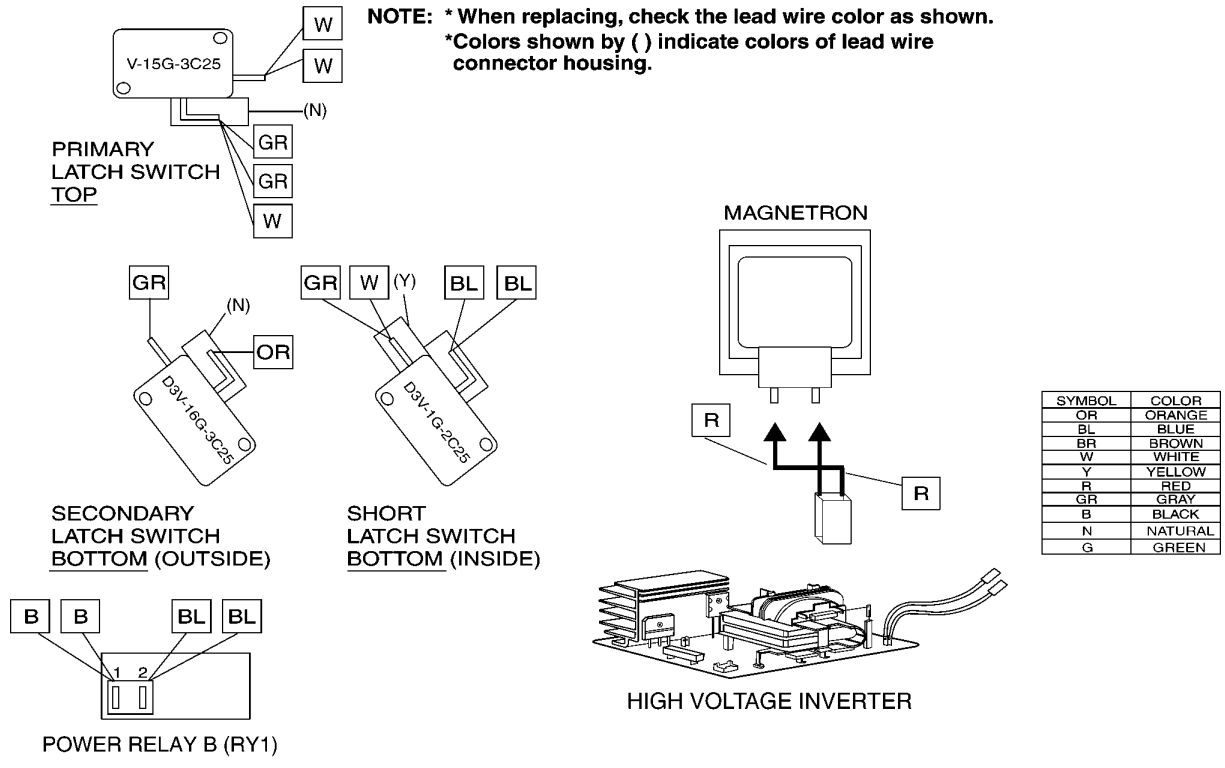
1 SCHEMATIC DIAGRAM

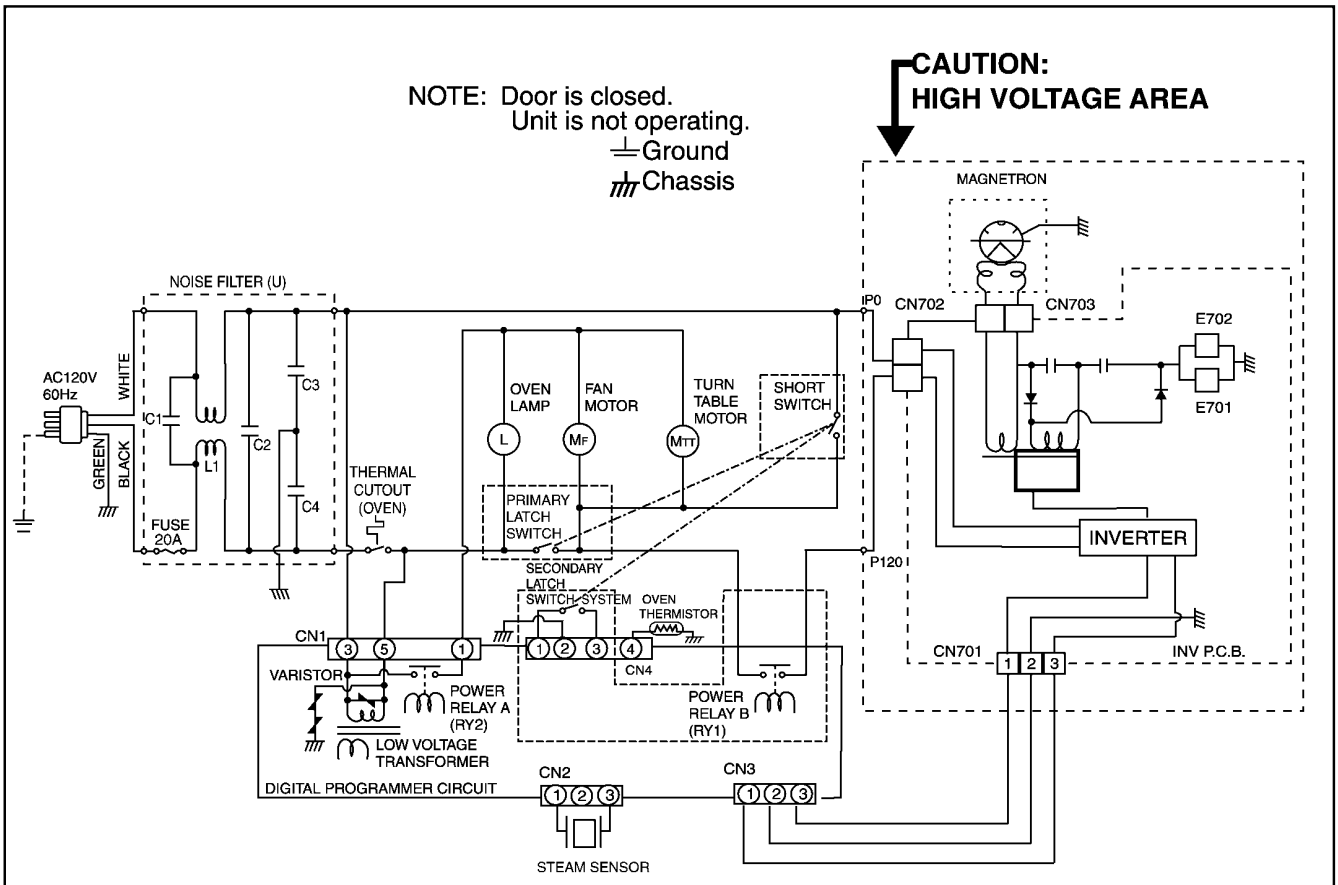
1.1. APH



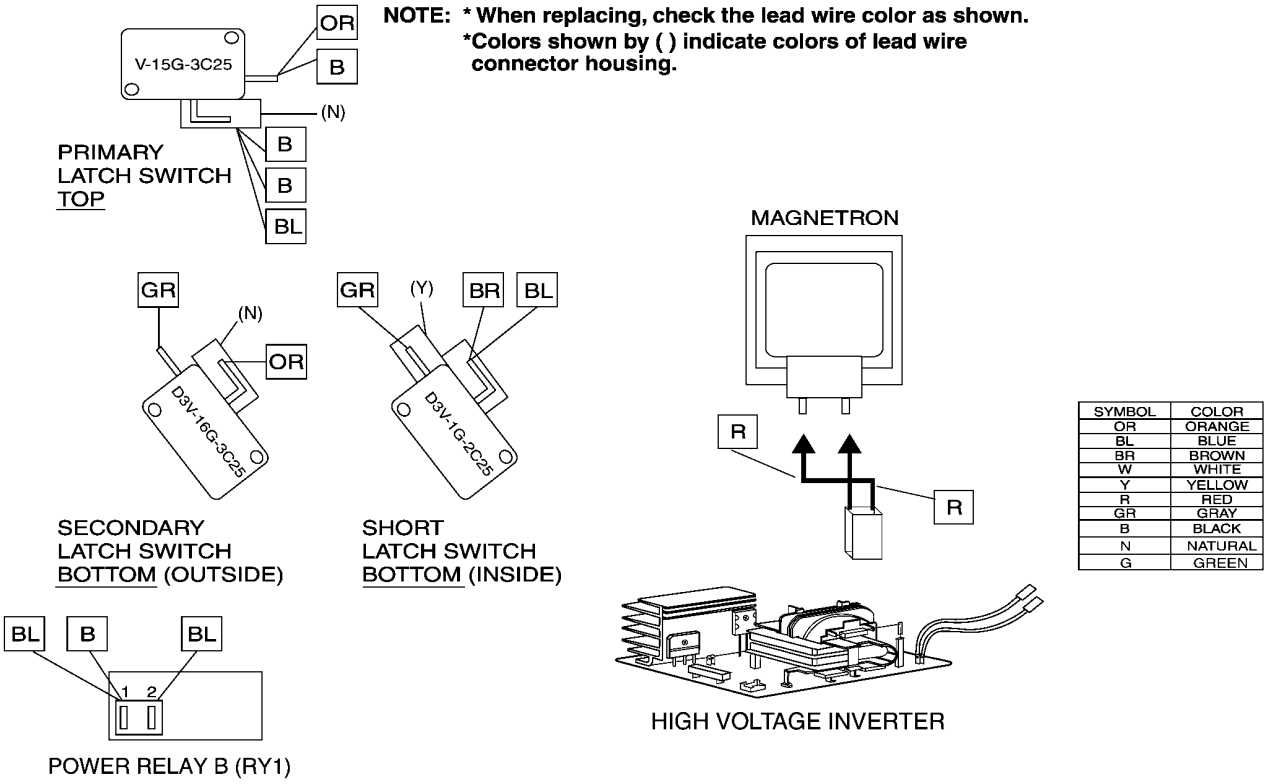
WIRING DIAGRAM (APH)



1.2. CPH



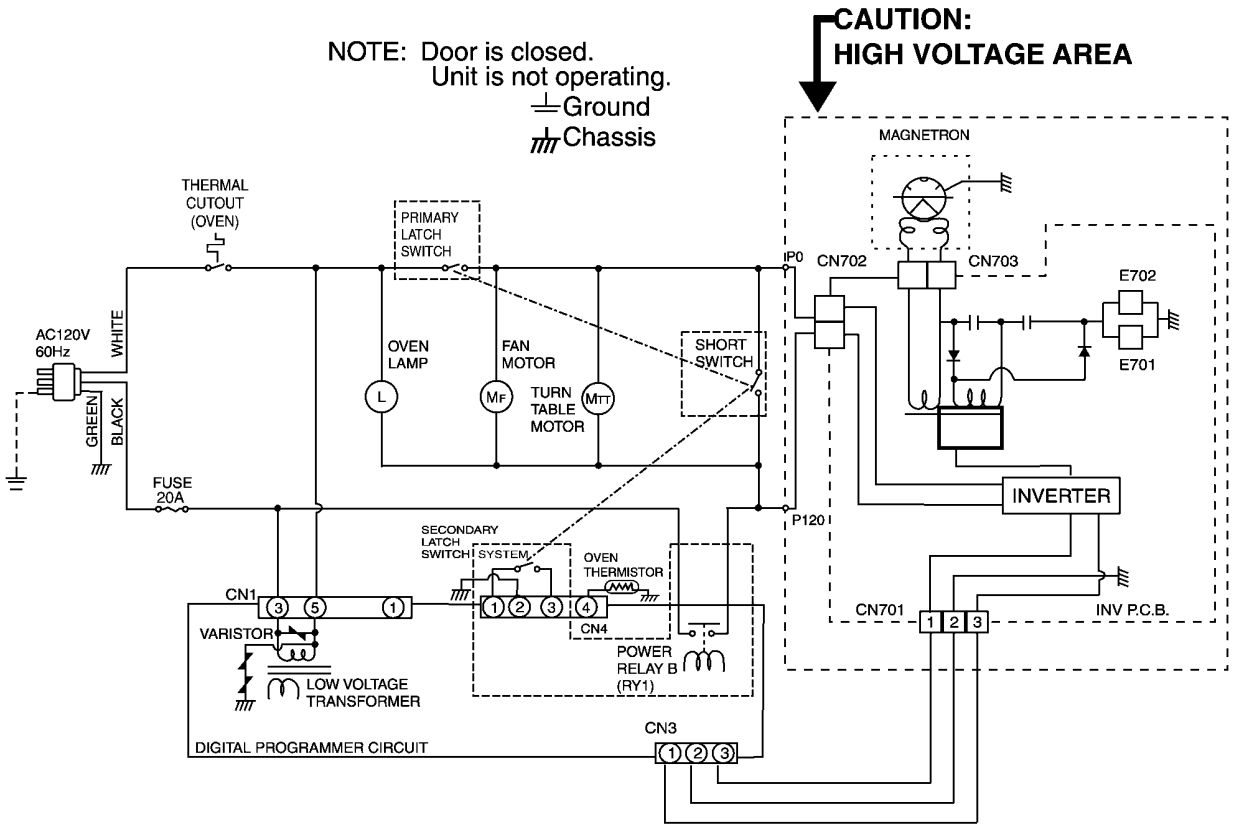
WIRING DIAGRAM (CPH)



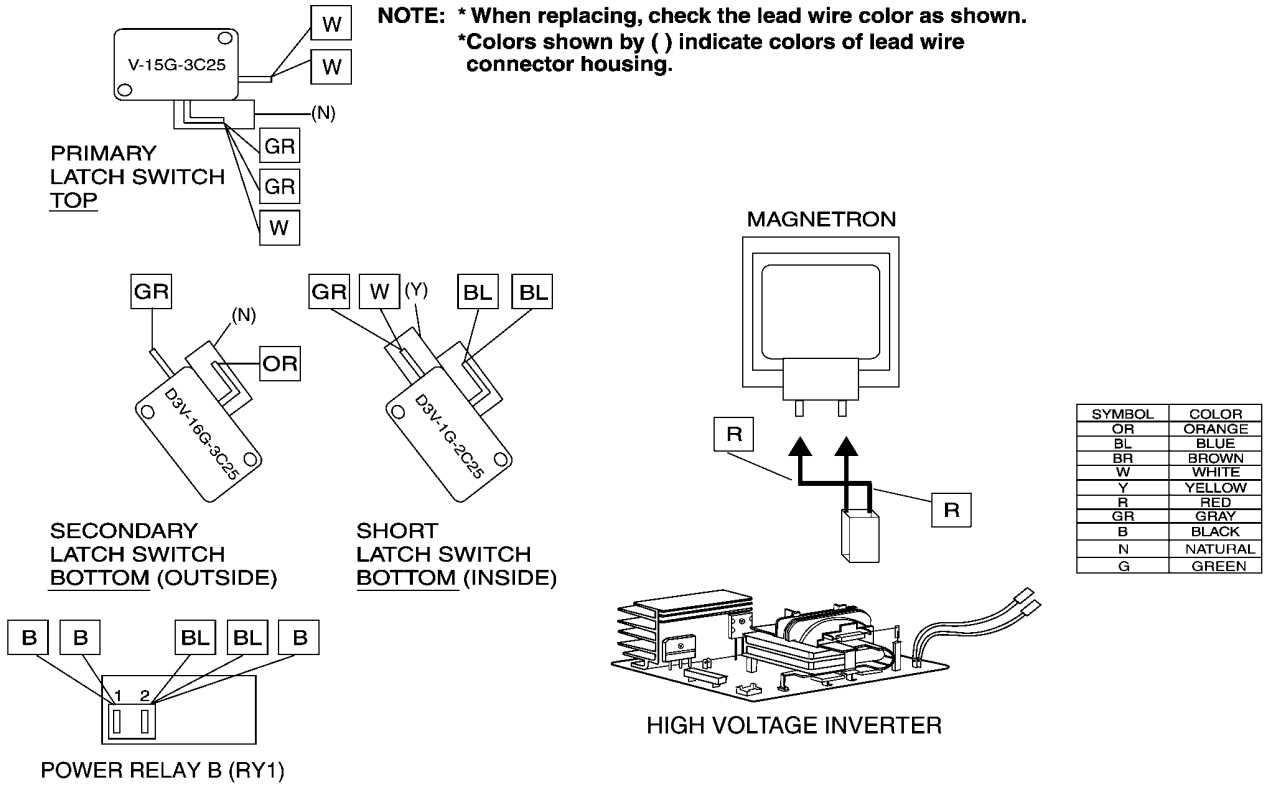
NOTE: * When replacing, check the lead wire color as shown.
***Colors shown by ( ) indicate colors of lead wire connector housing.**

SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK
N	NATURAL
G	GREEN

1.3. RPH/RTH



WIRING DIAGRAM (RPH/RTH)



SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK
N	NATURAL
G	GREEN

2 CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is a high voltage, high current device. It is free from danger in ordinary use, though extreme care should be taken during repair.

Caution

Servicemen should remove their watches whenever working close to or replacing the magnetron.

2.1. Check the grounding

Do not operate on a two wire extension cord. The microwave oven is designed to be grounded when used. It is imperative, therefore, to ensure the appliance is properly grounded before beginning repair work.

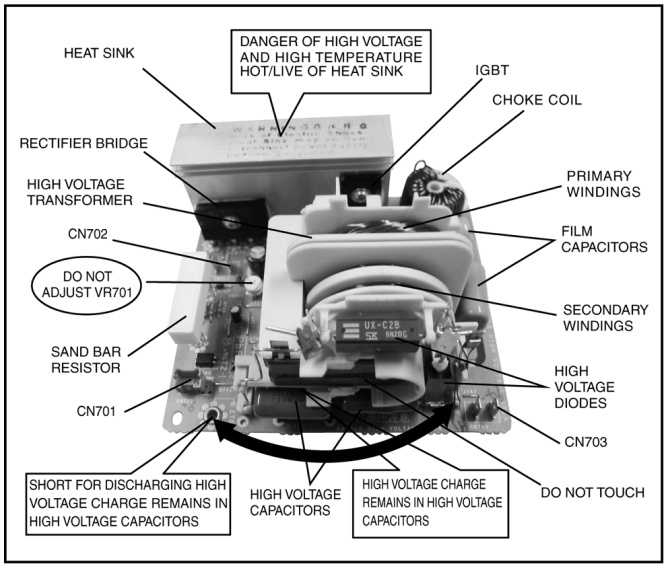
2.2. Inverter warnings

DANGER, HIGH VOLTAGE AND HIGHTEMPERATURE (HOT/LIVE) OF THE INVERTERPOWER SUPPLY (U)

The High Voltage Inverter Power Supply handles very high voltage and current for the magnetron tube. Though it is free from danger in ordinary use, extreme care should be taken during repair.

The aluminum heat sink is also energized with high voltage (HOT), do not touch when the AC input terminals are energized. The power device Collector is directly connected to the aluminum heat sink.

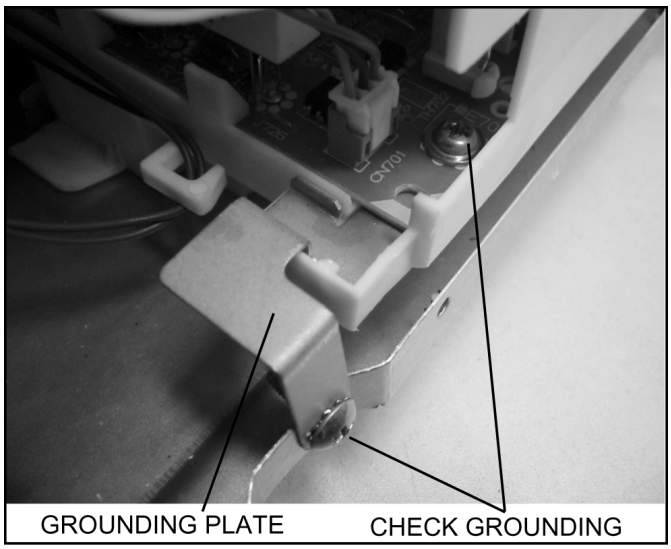
The aluminum heat sink may be HOT due to heat energy, therefore, extreme care should be taken during servicing.



H.V. Inverter warning

WARNING FOR INVERTER POWER SUPPLY (U) GROUNDING

Check the High Voltage Inverter Power Supply circuit grounding. The high voltage inverter power supply circuit board must have a proper chassis ground. The inverter grounding bracket must be connected to the chassis. If the inverter board is not grounded it will expose the user to very high voltages and cause extreme DANGER! Be sure that the inverter circuit is properly grounded via the inverter grounding bracket.

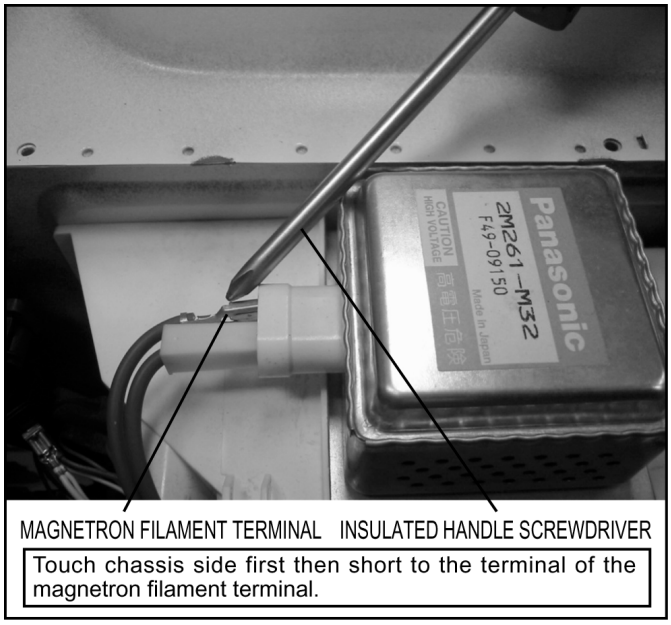


Grounding of the inverter circuit board

WARNING! DISCHARGE THE HIGH VOLATGE CAPACITORS

For about 30 seconds after the oven is turned off, an electric charge remains in the high voltage capacitors in the Inverter Power Supply circuit board.

When replacing or checking parts, remove the power plug from the outlet and short the inverter output terminal of the magnetron filament terminals to the chassis ground with an insulated handle screwdriver to discharge. Please be sure to touch the chassis ground side first and then short to the output terminals.



Touch chassis side first then short to the terminal of the magnetron filament terminal.

Discharging the high voltage capacitors

WARNING

There is high voltage present with high current capabilities in the circuits of the primary and secondary windings, choke coil and heat sinkof the inverter. It is extremely dangerous to work on or near these circuits with the oven energized. DO NOT measure the voltage in the high voltage circuit including the filament voltage of the magnetron.

WARNING

Never touch any circuit wiring with your hand or with an insulated tool during operation.

2.3. Part replacement.

When any part or component is to be replaced, always ensure that the power cord is removed from the wall outlet.

2.4. When the 20A fuse is blown due to the operation of the short switch:

WARNING

When the 20A 120V fuse is blown due to the operation of the interlock monitor switch, replace all of the components (primary latch switch, short switch and power relay B (RY1)).

1. This is mandatory. Refer to “adjustments and measurements” for the location of these switches.
2. When replacing the fuse, confirm that it has the appropriate rating for these models.
3. When replacing faulty switches, be sure the mounting tabs are not bent, broken or deficient in their ability to hold the switches.

2.5. Avoid inserting nails, wire etc. through any holes in the unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any holes or gaps, because such objects may work as an antennaand cause microwave leakage.

2.6. Confirm after repair

1. After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loosen or missing. Microwave might leak if screws are not properly tightened.
2. Make sure that all electrical connections are tight before inserting the plug into the wall outlet.
3. Check for microwave energy leakage. (Refer to procedure for measuring microwave energy leakage).

CAUTION MICROWAVE RADIATION

USE CAUTION NOT TO BECOME EXPOSED TO RADIATION FROM THE MICROWAVE MAGNETRON OR OTHER PARTS CONDUCTING MICROWAVE ENERGY.

IMPORTANT NOTICE

The following components have potentials above 2000V while the appliance is operated.

- Magnetron
- High voltage transformer (Located on inverter (U))
- High voltage diodes (Located on inverter (U))
- High voltage capacitors (Located on inverter (U))

Pay special attention to these areas.

When the appliance is operated with the door hinges or magnetron installed incorrectly, the microwave leakage can exceed more than 5mW/cm^2. After repair or exchange, it is very important to check if the magnetron and the door hinges are correctly installed.

2.7. Sharp edges

Caution

Please use caution when unpacking, installing or moving the unit, as some exposed edges may be sharp to the touch and cause injury if not handled with care.

3 MEASUREMENTS AND ADJUSTMENTS

WARNING

* For continued protection against radiation hazard, replace only with identical replacement parts (For touch models part No. J61415G10XN, Type No. V-15G-3C25 for primary latch switch; Part No. J61414T00AP, Type No. D3V-16G-3C25 for Secondary latch switch and Part No. J61784T00AP, Type No. D3V-1G-2C25 for short switch.)
* When the 20 Amp. fuse is blown due to the operation of the short switch, you must replace power relay B (part No. AEBGJQC25F18, Type No.G5G-1A18VDC), Primary latch switch and the short switch. Then follow the installation procedures below.
* Interlock switch replacement In replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.
* Refer to schematic diagram to ensure proper connection.

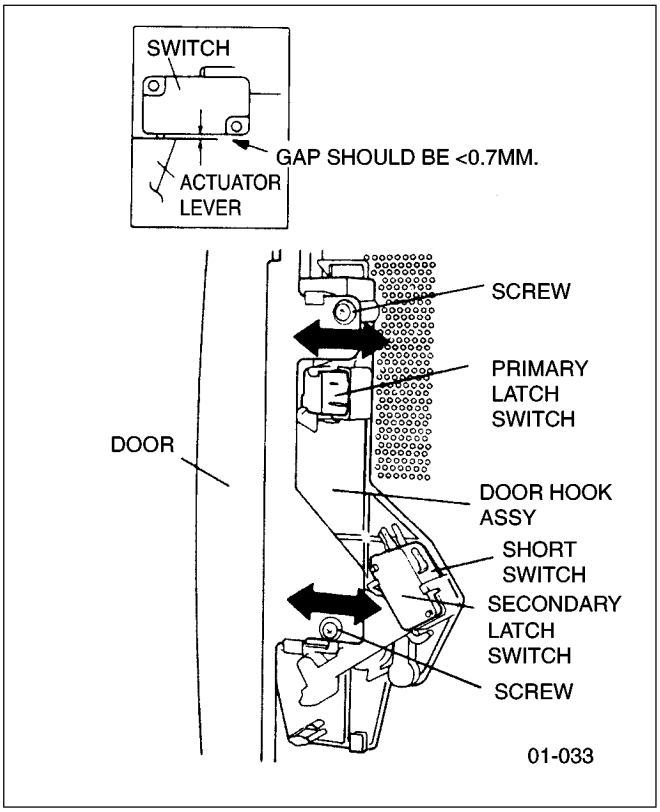
3.1. Adjustment of primary latch switch, secondary latch switch and short switch.

1. Mount the Primary latch switch, the Secondary latch switch and the Short switch to the door hook assembly as shown in ILL.

   NOTE:

   No specific individual adjustments during installation of the Primary latch switch, Secondary latch switch or Short switch to the door hook are required.

2. When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of the arrows in the illustration so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the door hook assembly to the oven assembly.
3. Reconnect the short switch and check the continuity of the monitor circuit and all latch switches again by following the component test procedures.



3.2. Measurement of microwave output

The output power of the magnetron can be determined by performing IEC standard test procedures. However,due to the complexity of IEC test procedures, it is recommended to test the magnetron using the simple method outlined below.

Necessary Equipment:

*1 liter beaker *Glass thermometer
*Wrist watch or stopwatch

NOTE:

Check the line voltage under load.Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurately as possible.

1. Fill the beaker with exactly one liter of tap water.Stir the water using the thermometer and record the water's temperature. (recorded as T1).
2. Place the beaker on the center of glass tray.
   Set the oven for High power and heat it for exactly one minute.
3. Stir the water again and read the temperature of the water. (recorded as T2).
4. The normal temperature rise at High power level for each model is as shown in table.

TABLE (1L-1min.test)

RATED OUTPUT	TEMPERATURE RISE
1200W	Min. 18.5°F(10.3°C)
1300W	Min. 19.8°F(11.1°C)

4 PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE

WARNING

Check for radiation leakage after every servicing. Should the leakage be more than 2 mW/cm^2 (1mW/cm^2 for Canada) inform PSTC, PSC, or PCI immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S. and Health and Welfare Canada regulation. This requirement must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

NOTE:

The U.S. Government standard is 5 mW/cm^2 while in the customer's home. 2mW/cm^2 stated here is our own voluntary standard. (1mW/cm^2 for Canada)

4.1. Equipment

- Electromagnatic radiation monitor
- Glass thermometer 212°F or 100°C
- 600cc glass beaker

4.2. Procedure for measuring radiation leakage

Note before measuring.

- Do not exceed meter full scale deflection. Leakage monitor should initially be set to the highest scale.
- To prevent false readings the test probe should be held by the grip portion of the handle only and moved along the shaded area in Figure no faster than 1 inch/sec (2.5cm/sec).
- Leakage with the outer panel removed ..... less than 5mW/cm^2.
- Leakage for a fully assembled oven with door normally closed ..... less than 2mW/cm^2 (1mW/cm^2 for Canada).
- Leakage for a fully assembled oven [Before the latch switch (primary) is interrupted] while pulling the door ..... less than 2mW/cm^2.

1. Pour 275 ± 15cc (9ozs^s± 1/2oz) of 20°C ± 5°C (68° ± 9°F) water in a beaker which is graduated to 600cc, and place in the center of the oven.
2. Set the radiation monitor to 2450MHz and use it following the manufacturer´s recommended test procedure to assure correct results.
3. When measuring the leakage, always use the 2 inch (5cm) spacer supplied with the probe.
4. Tap the start pad or set the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.

4.2.1. Measurement with the outer panel removed.

Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring around the magnetron.

WARNING

Avoid contacting any high voltage parts.

4.2.2. Measurements with a fully assembled oven.

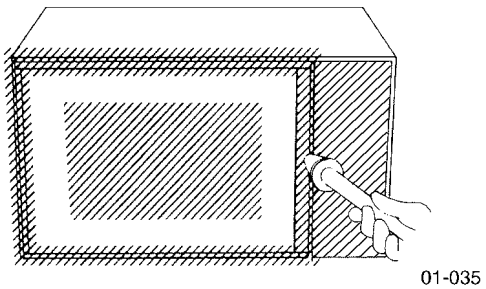
After all components, including outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening, control panel and air inlet openings.

4.3. Record keeping and notification after measurement

- After any adjustment or repair to a microwave oven, a leakage reading must be taken. Record this leakage reading on the repair ticket even if it is zero.

  A copy of this repair ticket and the microwave leakage reading should be kept by repair facility.
- Should the radiation leakage be more than 2 mW/cm^2 (1mW/cm for Canada) after determining that all parts are in good condition, functioning properly, and genuine replacement parts as listed in this manual have been used, immediately notify PSTC, PSC or PCI.

4.4. At least once a year, have the radiation monitor checked for calibration by its manufacturer.



MOVE PROBE ALONG SHADED AREA(//////)AROUND EXHAUST OPENINGS AND AROUND AIR INLET OPENING

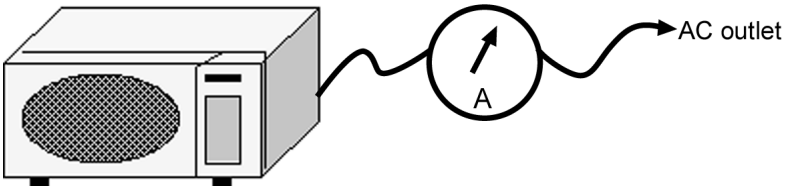
5 SIMPLE WAY OF H.V. INVERTER/MAGNETRON TROUBLESHOOTING

Purpose:

Simple way **(3/37 seconds rule)** of identifying whether it's Magnetron, Inverter, or others.

Set-up:

The unit under question is connected through the Ammeter as shown below.



Procedure:

Follow the matrix table below to identify the problem source.

Note:

Do not replace both Inverter board and Magnetron simultaneously and automatically without going through this procedure.

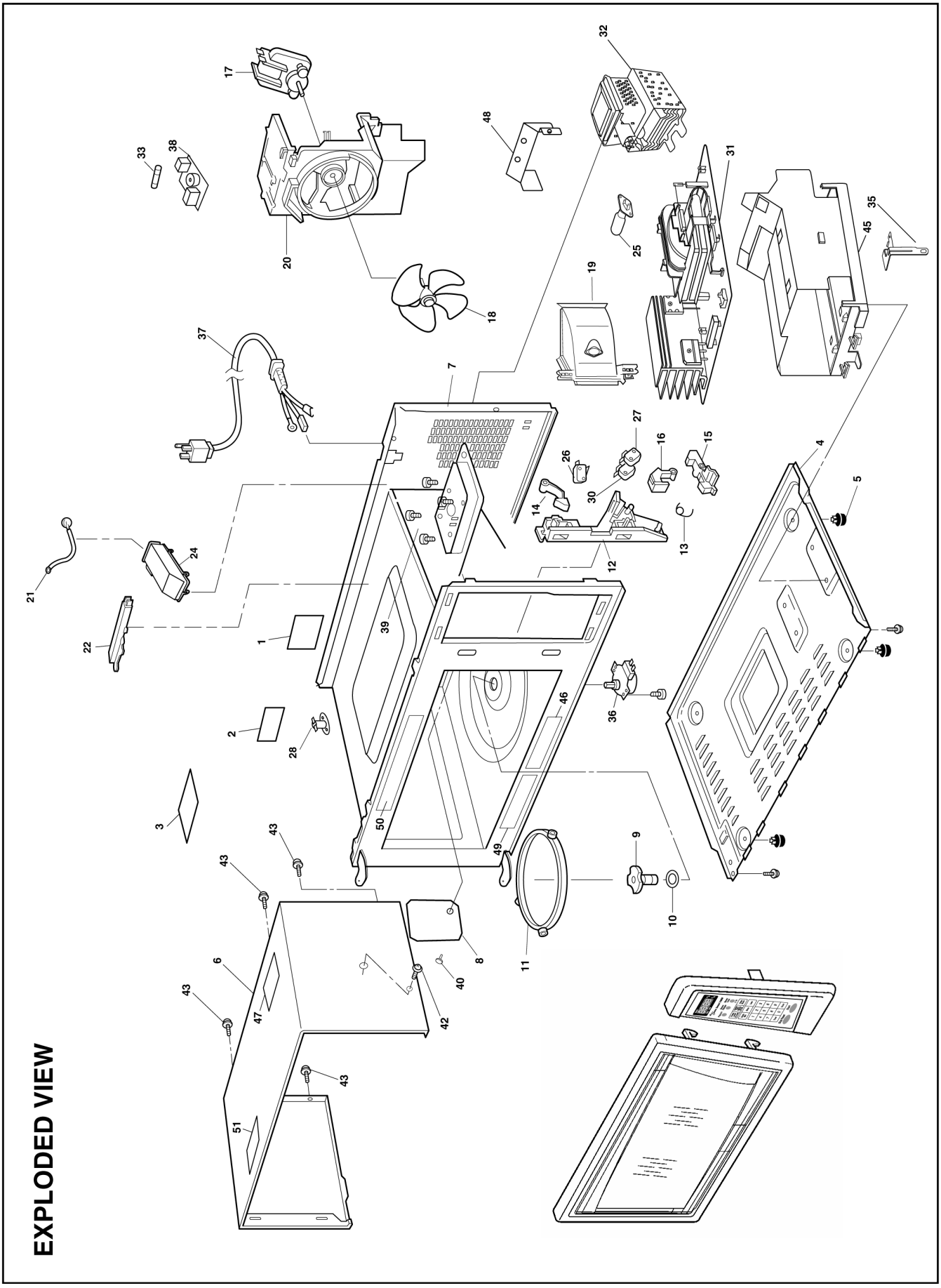
Power will:	Ammeter reading is:	To do:	Remedy:
Shut off in 37 seconds after "Start".	1. Between 0.5A and 1.0A.	Check and repair open magnetron circuit	Open magnetron wiring between Inverter and magnetron terminal.
	2. Between 1.0A and 2.0A.	Check continuity of D702 in Inverter PCB.	
		⇩	
		1. D702 shorted	Replace **H.V.Inverter**(F606Y8M00AP)
		2. D702 is OK	Replace **magnetron**
Shut off in 3 seconds after "Start"	1. Less than 0.5A	Check open circuit: Latch Switch, DPC, Power Relay and CN701	Replace defective component(s), or correct switch, cables and connectors.

6 H.V.INVERTER BOARD MAIN PARTS LIST (F606Y8M00AP)

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
DB701		B0FBBS000001	BRIDGE DIODE	1	20A, 600V
L701		F50206G00AP	CHOKE COIL	1	
Q701		B1JAGV000015	TRANSISTOR SI	1	1000V
T701	⚠	A609A8M00AP	H.V. TRANSFORMER	1	(INCLUDING D701,D702,C706,C707)
C701		ECWF5284N300	CAPACITOR	1	0.28µF/500V
C702		ECWF2455N644	CAPACITOR	1	4.5µF/250V

7 EXPLODED VIEW AND PARTS LIST

7.1. EXPLODED VIEW



7.2. PARTS LIST

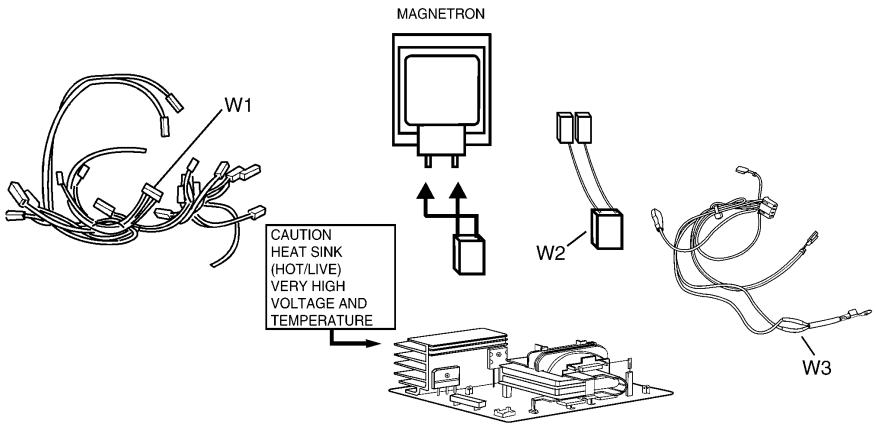
NOTE:

1. When ordering replacement part(s), please use part number(s) shown in this part list.
   Do not use description of the part.
2. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components, use only manufacture's specified parts.

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
1		F00064W70AP	CAUTION LABEL	1	SD697S APH,SD667S APH,SN677S APH,SN657S APH
1		F00069660AP	CAUTION LABEL	1	SN667 APH,SA647B/W APH,ST677S RPH/RTH, ST657W RPH/RTH
1		F00067600CP	CAUTION LABEL	1	CPH
2		F00078M60BAP	NAME PLATE	1	SN667B/BB APH
2		F00078M60HAP	NAME PLATE	1	SN667W/WB APH
2		F00078M60SAP	NAME PLATE	1	SN667MB APH
2		F00078M90BAP	NAME PLATE	1	SA646B APH
2		F00078M90HAP	NAME PLATE	1	SA646W APH
2		F00078R30HRP	NAME PLATE	1	ST657W RPH
2		F00078R40HRP	NAME PLATE	1	ST657W RTH
3		F00338F00AP	FUSE LABEL	1	APH,CPH
3		F00338F00RP	FUSE LABEL	1	RPH,RTH
4		F10016K10APG	BASE	1	
5		F10084T00AP	RUBBER FOOT	4	
6		F110D5Y00SAP	CABINET BODY(U)	1	SD677S CPH
6		F110D5Y30SAP	CABINET BODY(U)	1	SD697S APH,SD667S APH,SN677S APH, SN657S APH,ST677S RPH/RTH
6		F110D5Y60SAP	CABINET BODY(U)	1	SN667MB APH
6		F110D5Y30BAP	CABINET BODY(U)	1	SN667B/BB APH,SN667B CPH,SA647B APH
6		F110D5Y30HAP	CABINET BODY(U)	1	SN667W/WB APH,SN667W CPH,ST657W RPH/RTH
6		F110D5Y30HCP	CABINET BODY(U)	1	SA647W APH
7	⚠	F200A8F00AP	OVEN(U)	1	EXCEPT SA647B/W APH, ST677S RPH/RTH & ST657W RTH/RPH
7	⚠	F200A8F40AP	OVEN(U)	1	SA647B/W APH,ST677S RPH/RTH,ST657W RTH/RPH
8		F20555L00AP	COVER	1	
9		F21315Y00AP	PULLY SHAFT	1	
10		F2177-F80	WASHER	1	
11		F290D9330AP	ROLLER RING(U)	1	
12	⚠	F30206G30AP	DOOR HOOK	1	EXCEPT SA647B/W APH
12	⚠	F30206K50AP	DOOR HOOK	1	SA647B/W APH
13		F3097-5L00	LATCH SPRING	1	SA647B/W APH
14		F31366G30AP	HOOK LEVER A	1	EXCEPT SA647B/W APH
14		F31366K50AP	HOOK LEVER A	1	SA647B/W APH
15		F31376G30AP	HOOK LEVER B	1	EXCEPT SA647B/W APH
15		F31376K50AP	HOOK LEVER B	1	SA647B/W APH
16		F31386G30AP	HOOK LEVER C	1	EXCEPT SA647B/W APH
16		F31386K50AP	HOOK LEVER C	1	SA647B/W APH
17		F400A8F00AP	FAN MOTOR	1	AC120V,SINGLE PHASE,60Hz
18		F40084T00AP	FAN BLADE	1	
19		F40257D00APG	AIR GUIDE A	1	
20		F41445Y00AP	ORIFICE	1	
21		A707S4T00AP	STEAM SENSOR	1	EXCEPT SA647B/W APH, ST677S RPH/RTH & ST657W RPH/RTH
22		F64508660AP	SENSOR COVER B	1	EXCEPT SA647B/W APH, ST677S RPH/RTH & ST657W RPH/RTH
24		F65434W00AP	SENSOR COVER C	1	EXCEPT SA647B/W APH, ST677S RPH/RTH & ST657W RPH/RTH
25		F612E5U40AP	INCANDESCENT LAMP (U)	1	
26	⚠	J61415G10XN	MICRO SWITCH	1	(PRIMARY LATCH SWITCH) (V-15G-3C25)
27	⚠	J61414T00AP	MICRO SWITCH	1	(SECONDARY LATCH SWITCH) (D3V-16G-3C25)
28	⚠	F61456N60AP	THERMAL CUTOUT	1	
30	⚠	F61785U30XN	MICRO SWITCH	1	(SHORT SWITCH) (D3V-1G-2C25)
31	⚠	F606Y8M00AP	H.V.INVERTER (U)	1	
32	⚠	2M261-M32KLP	MAGNETRON	1	APH,RPH,RTH
32	⚠	2M261-M32JP	MAGNETRON	1	CPH

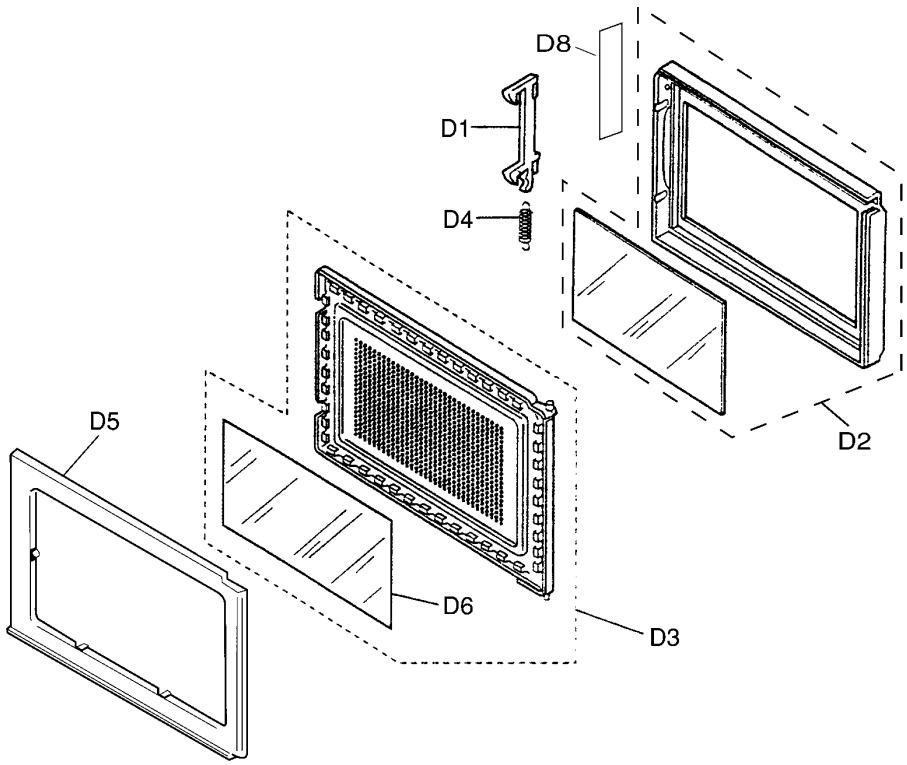
Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
33	⚠	F62308F00AP	FUSE	1	CPH
33	⚠	F62308F20AP	FUSE	1	APH,RPH,RTH
34		F62315G10XN	FUSE HOLDER	1	RPH,RTH
35		F66626K50AP	GROUNDING PLATE	1	
36		F63265G60AP	TURNTABLE MOTOR	1	
37	⚠	F900C4T60CP	AC CORD W/PLUG	1	SD697S APH,SD667S APH,SN677S APH,SN657S APH
37	⚠	F900C4T00AP	AC CORD W/PLUG	1	SN667 APH,SA647B/W APH, ST677S RPH/RTH,ST657W RPH/RTH
37	⚠	F900C5Y30CP	AC CORD W/PLUG	1	CPH
38		F692Y8F00APX	NOISE FILTER (U)	1	APH,CPH
39		XTWFA4+12T	SCREW	4	FOR MAGNETRON
40		XTTFA4+6BN	SCREW	1	FOR COVER
42		XTCAFA4+12AFM	SCREW	1	FOR CABINET BODY SIDE (SD677S CPH)
42		XTCAFA4+12AFS	SCREW	1	FOR CABINET BODY SIDE (SD697S APH,SD667S APH, SN677S APH, SN667MB APH,SN657S APH, ST677S RPH/RTH)
42		XTCAFA4+12AFK	SCREW	1	FOR CABINET BODY SIDE (SN667B/BB APH,SN667B CPH, SA647B APH)
42		XTCAFA4+12AFW	SCREW	1	FOR CABINET BODY SIDE (SN667W/WB APH,SN667W CPH, SA647W APH, ST657W RPH/RTH)
43		XTTBFE4T12A0	SCREW	4	FOR CABINET BODY
45		F65856K50AP	INVERTER BRACKET	1	
46		F03346K10AP	MENU LABEL	1	SD697S APH,SD667S APH,SN677S APH
46		F03346K10CP	MENU LABEL	1	SD677S CPH
46		F03347D60AP	MENU LABEL	1	SN667B/W/BB/WB/MB APH
46		F03347D60CP	MENU LABEL	1	SN667B/W CPH
46		F03345Y30AP	MENU LABEL	1	SN657S APH
46		F03347D80AP	MENU LABEL	1	SA647B/W APH
46		F03347G50RP	MENU LABEL	1	ST677S RPH/RTH,ST657W RPH/RTH
47		F02445Y00AP	CAUTION LABEL	1	SD677S CPH
48		F40264T60APG	AIR GUIDE B	1	
49		F04467D00AP	FUNCTION LABEL	1	SD667S APH
49		F04467D00CP	FUNCTION LABEL	1	SD677S CPH
50		F00067C50AP	CAUTION LABEL	1	APH,RPH,RTH
50		F00067C50CP	CAUTION LABEL	1	CPH
51		F00066G00RP	CAUTION LABEL	1	ST677S RPH/RTH

7.3. WIRING MATERIALS



Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
W1		F030A7D10AP	LEAD WIRE HARNESS	1	APH
W1		F030A7D00CP	LEAD WIRE HARNESS	1	CPH
W1		F030A7D00RP	LEAD WIRE HARNESS	1	RPH,RTH
W2		F030E5L00AP	H.V.LEAD WIRE	1	APH,RPH,RTH
W2		F030E4T00CP	H.V.LEAD WIRE	1	CPH
W3		F03537D00AP	LEAD WIRE HARNESS U	1	(INCLUDING THERMISTOR)

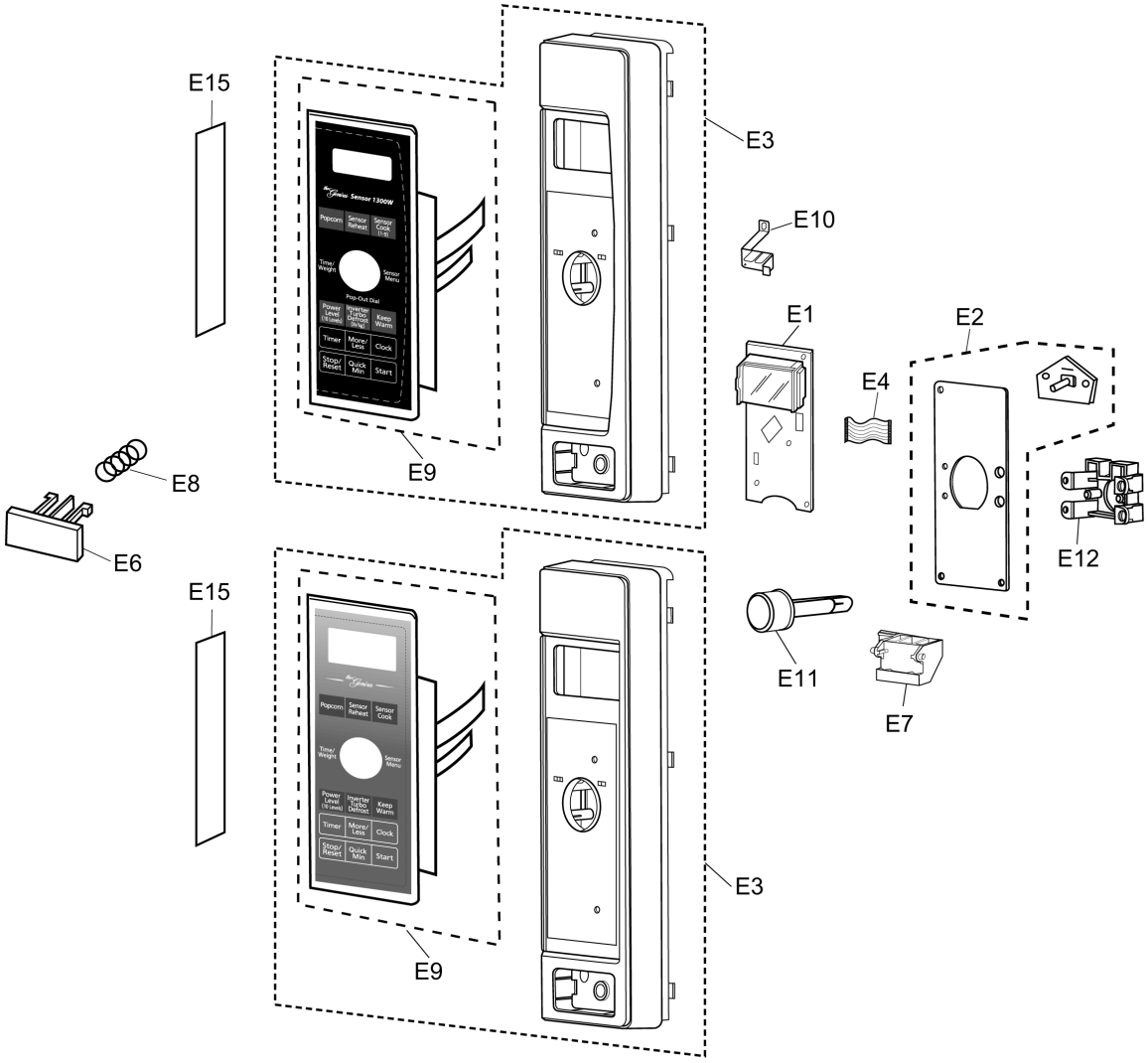
7.4. DOOR ASSEMBLY



Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
D1		F30186P40AG	DOOR KEY A	1	EXCEPT SA647B/W APH
D1		F30184Y30XN	DOOR KEY A	1	SA647B/W APH
D2	⚠	F301A8M00SAP	DOOR A (U)	1	SD697S APH,SN657S APH,ST677S RPH/RTH
D2	⚠	F301A8F60SQP	DOOR A (U)	1	SD677S CPH
D2	⚠	F301A8F00SCP	DOOR A (U)	1	SD667S APH
D2	⚠	F301A8M40SAP	DOOR A (U)	1	SN677S APH
D2	⚠	F302A8M60BAP	DOOR A (U)	1	SN667B/BB APH,SN667B CPH
D2	⚠	F302A8M60HAP	DOOR A (U)	1	SN667W/WB APH,SN667W CPH,ST657W RPH/RTH
D2	⚠	F302A8M60SAP	DOOR A (U)	1	SN667MB APH
D2	⚠	F302A8L80BCP	DOOR A (U)	1	SA647B APH
D2	⚠	F302A8F50HCP	DOOR A (U)	1	SA647W APH
D3	⚠	F302K5L00AP	DOOR E (U)	1	
D4		F30215G10XN	DOOR KEY SPRING	1	
D5	⚠	F30854T00AP	DOOR C	1	
D6	⚠	F31454T00AP	DOOR SCREEN A	1	
D8		F02459660AP	DHHS LABEL	1	SD697S APH,SD667S APH,SN677S APH, SN657S APH, ST677S RPH/RTH
D8		F04114180CP	HC LABEL	1	SD677S CPH

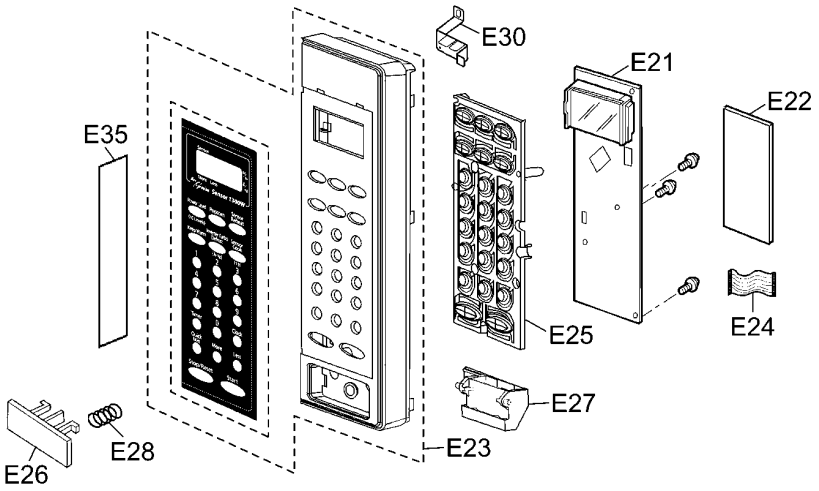
7.5. ESCUTCHEON BASE ASSEMBLY

7.5.1. NN-SD697S APH, SD677S CPH, SD667S APH



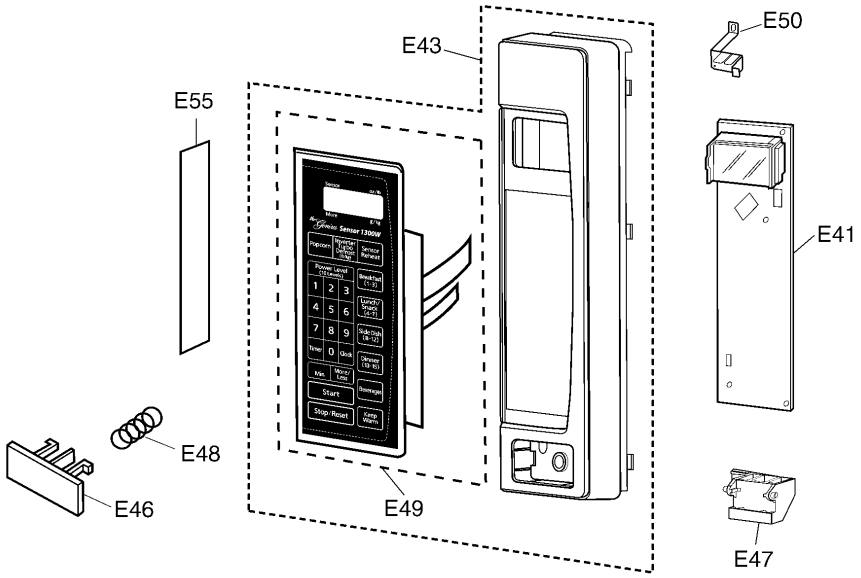
Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
E1		F603L8M00AP	D.P.CIRCUIT (AU)	1	SD697S APH
E1		F603L8M10CP	D.P.CIRCUIT (AU)	1	SD677S CPH
E1		F603L8L60AP	D.P.CIRCUIT (AU)	1	SD667S APH
E2		F603Y8M00AP	D.P.CIRCUIT (DU)	1	SD697S APH
E2		F603Y7D00CP	D.P.CIRCUIT (DU)	1	SD677S CPH
E2		F603Y7D00AP	D.P.CIRCUIT (DU)	1	SD667S APH
E3		F800L8M00SAP	ESCUTCHEON BASE (U)	1	SD697S APH
E3		F800L8L70SCP	ESCUTCHEON BASE (U)	1	SD677S CPH
E3		F800L8M30SAP	ESCUTCHEON BASE (U)	1	SD667S APH
E4		F66167D00AP	FLAT CABLE	1	SD697S APH,SD677S CPH,SD667S APH
E6		F80725Y00SAP	DOOR OPENING BUTTON (U)	1	SD697S APH,SD677S CPH,SD667S APH
E7		F82565Y00AP	DOOR OPENING LEVER	1	SD697S APH,SD677S CPH,SD667S APH
E8		F80375K00AP	COOK BUTTON SPRING	1	
E9		F630Y8M00BAP	MEMBRANE SWITCH (U)	1	SD697S APH
E9		F630Y7D00SCP	MEMBRANE SWITCH (U)	1	SD677S CPH
E9		F630Y7D00SAP	MEMBRANE SWITCH (U)	1	SD667S APH
E10		F90095X00AP	GROUNDING PANEL	1	SD697S APH,SD677S CPH,SD667S APH
E11		F803G7D00BAP	POP-UP DIAL (U)	1	SD697S APH,SD677S CPH,SD667S APH
E12		F80187D00BAP	BACKSTOP	1	SD697S APH,SD677S CPH,SD667S APH
E15		F00078M00SAP	NAME PLATE	1	SD697S APH
E15		F00078L70SCP	NAME PLATE	1	SD677S CPH
E15		F00078M30SAP	NAME PLATE	1	SD667S APH

7.5.2. NN-SN677S APH



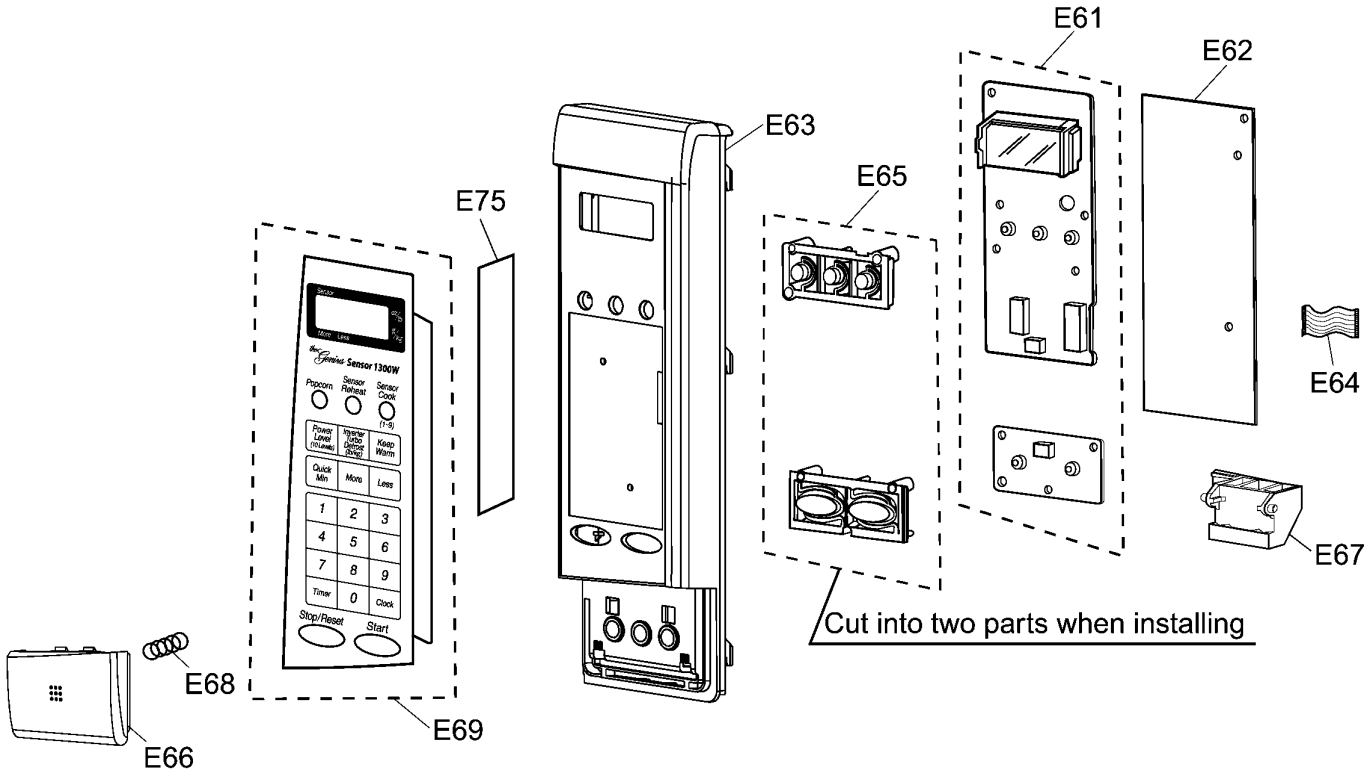
Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
E21		F603L8M50AP	D.P.CIRCUIT (AU)	1	SN677S APH
E22		F603Y7D60AP	D.P.CIRCUIT (DU)	1	SN677S APH
E23		F800L8M50SAP	ESCUTCHEON BASE (U)	1	SN677S APH
E24		F66164W20AP	FLAT CABLE	1	SN677S APH
E25		F82986K10AP	BUTTON	1	SN677S APH
E26		F80725Y00SAP	DOOR OPENING BUTTON (U)	1	SN677S APH
E27		F82566K10AP	DOOR OPENING LEVEL	1	SN677S APH
E28		F80375K00AP	COOK BUTTON SPRING	1	
E30		F90095X00AP	GROUNDING PANEL	1	SN677S APH
E35		F00078M50SAP	NAME PLATE	1	SN677S APH

7.5.3. NN-SN657S APH, ST677S RPH/RTH



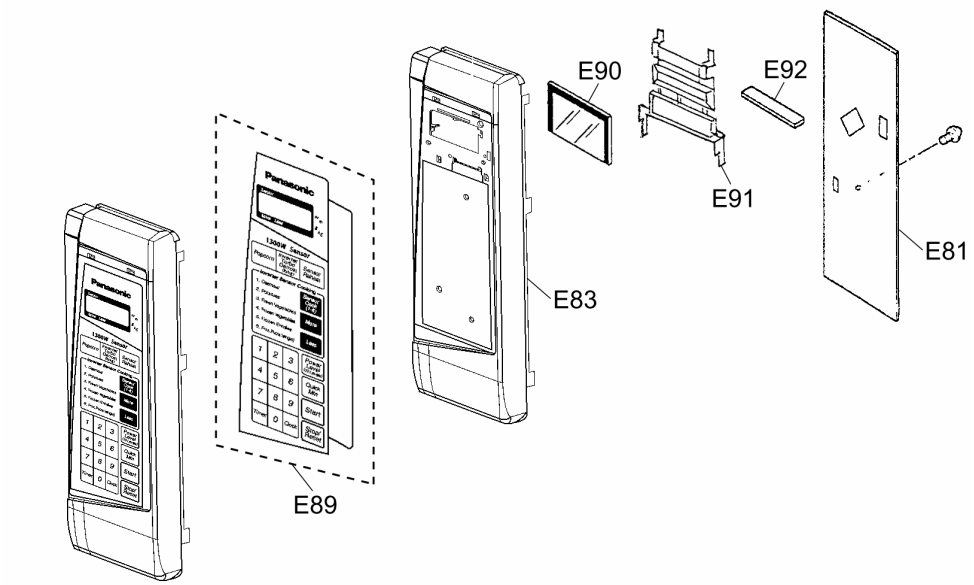
Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
E41		F603L8M70AP	D.P.CIRCUIT (AU)	1	SN657S APH
E41		F603L8R10RP	D.P.CIRCUIT (AU)	1	ST677S RPH/RTH
E43		F800L8M70SAP	ESCUTCHEON BASE (U)	1	SN657S APH
E43		F800L8R10SRP	ESCUTCHEON BASE (U)	1	ST677S RPH/RTH
E46		F80725Y00SAP	DOOR OPENING BUTTON (U)	1	SN657S APH,ST677S RPH/RTH
E47		F82565Y00AP	DOOR OPENING LEVER	1	SN657S APH,ST677S RPH/RTH
E48		F80375K00AP	COOK BUTTON SPRING	1	
E49		F630Y8M70BAP	MEMBRANE SWITCH (U)	1	SN657S APH
E49		F630Y6R10BRP	MEMBRANE SWITCH (U)	1	ST677S RPH/RTH
E50		F90095X00AP	GROUNDING PANEL	1	SN657S APH,ST677S RPH/RTH
E55		F00078M70SAP	NAME PLATE	1	SN657S APH
E55		F00078R10SRP	NAME PLATE	1	ST677S RPH
E55		F00078R20SRP	NAME PLATE	1	ST677S RTH

7.5.4. NN-SN667B/W/BB/WB/MB APH, SN667B/W CPH



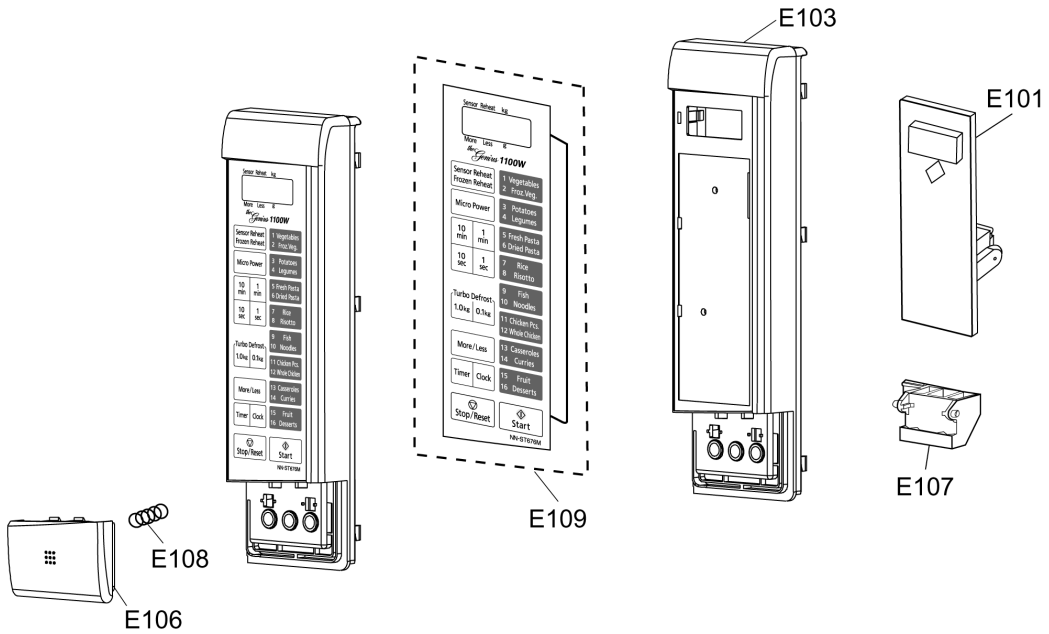
Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
E61		F603L8M60AP	D.P.CIRCUIT (AU)	1	SN667B/W/BB/WB/MB APH
E61		F603L8M60CP	D.P.CIRCUIT (AU)	1	SN667B/W CPH
E62		F603Y7D60AP	D.P.CIRCUIT (DU)	1	SN667B/W/BB/WB/MB APH
E62		F603Y7D60CP	D.P.CIRCUIT (DU)	1	SN667B/W CPH
E63		F80348M60BAP	ESCUTCHEON BASE	1	SN667B/BB APH,SN667B CPH
E63		F80348M60HAP	ESCUTCHEON BASE	1	SN667W/WB APH,SN667W CPH
E63		F80348M60SAP	ESCUTCHEON BASE	1	SN667MB APH
E64		F66164W20AP	FLAT CABLE	1	SN667B/W/BB/WB/MB APH,SN667B/W CPH
E65		F82988M60KAP	BUTTON	1	SN667B/W/BB/WB/MB APH,SN667B/W CPH
E66		F80728M60BAP	DOOR OPENING BUTTON	1	SN667B/BB APH,SN667B CPH
E66		F80728M60HAP	DOOR OPENING BUTTON	1	SN667W/WB APH,SN667W CPH
E66		F80728M60SAP	DOOR OPENING BUTTON	1	SN667MB APH
E67		F82566K10AP	DOOR OPENING LEVER	1	SN667B/W/BB/WB/MB APH,SN667B/W CPH
E68		F80375K00AP	COOK BUTTON SPRING	1	
E69		F630Y8M60BAP	MEMBRANE SWITCH (U)	1	SN667B/BB/MB APH
E69		F630Y8M60HAP	MEMBRANE SWITCH (U)	1	SN667W/WB APH
E69		F630Y8M60BCP	MEMBRANE SWITCH (U)	1	SN667B CPH
E69		F630Y8M60HCP	MEMBRANE SWITCH (U)	1	SN667W CPH
E75		F00078M60BCP	NAME PLATE	1	SN667B CPH
E75		F00078M60HCP	NAME PLATE	1	SN667W CPH

7.5.5. NN-SA647B/W APH



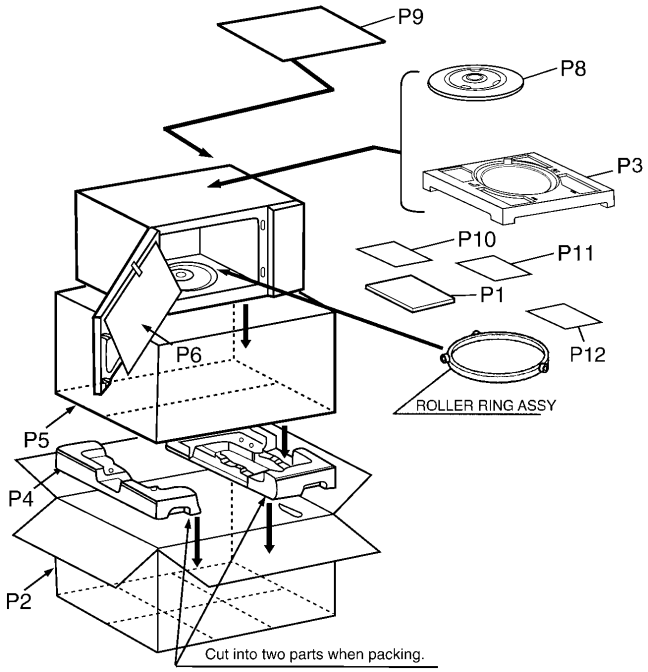
Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
E81		F603L8M90AP	D.P.CIRCUIT (AU)	1	SA647B/W APH
E83		F80346K50BAP	ESCUTCHEON BASE	1	SA647B APH
E83		F80346K50HAP	ESCUTCHEON BASE	1	SA647W APH
E89		F630Y6K80BAP	MEMBRANE SWITCH (U)	1	SA647B APH
E89		F630Y6K80HAP	MEMBRANE SWITCH (U)	1	SA647W APH
E90		L5AAAEC00056	DISPLAY	1	SA647B/W APH
E91		F66175L00AP	DISPLAY TUBE COVER	1	SA647B/W APH
E92		F67005U40XN	RUBBER CONNECTOR	1	SA647M APH

7.5.6. NN-ST657W RPH/RTH



Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
E101		F603L8R10RP	D.P.CIRCUIT (AU)	1	ST657W RPH/RTH
E103		F80348F70HQP	ESCUTCHEON BASE	1	ST657W RPH/RTH
E106		F80728F70HQP	DOOR OPENING BUTTON	1	ST657W RPH/RTH
E107		F82566K10AP	DOOR OPENING LEVEL	1	ST657W RPH/RTH
E108		F80375K00AP	COOK BUTTON SPRING	1	
E109		F630Y8R30HRP	MEMBRANE SWITCH (U)	1	ST657W RPH/RTH

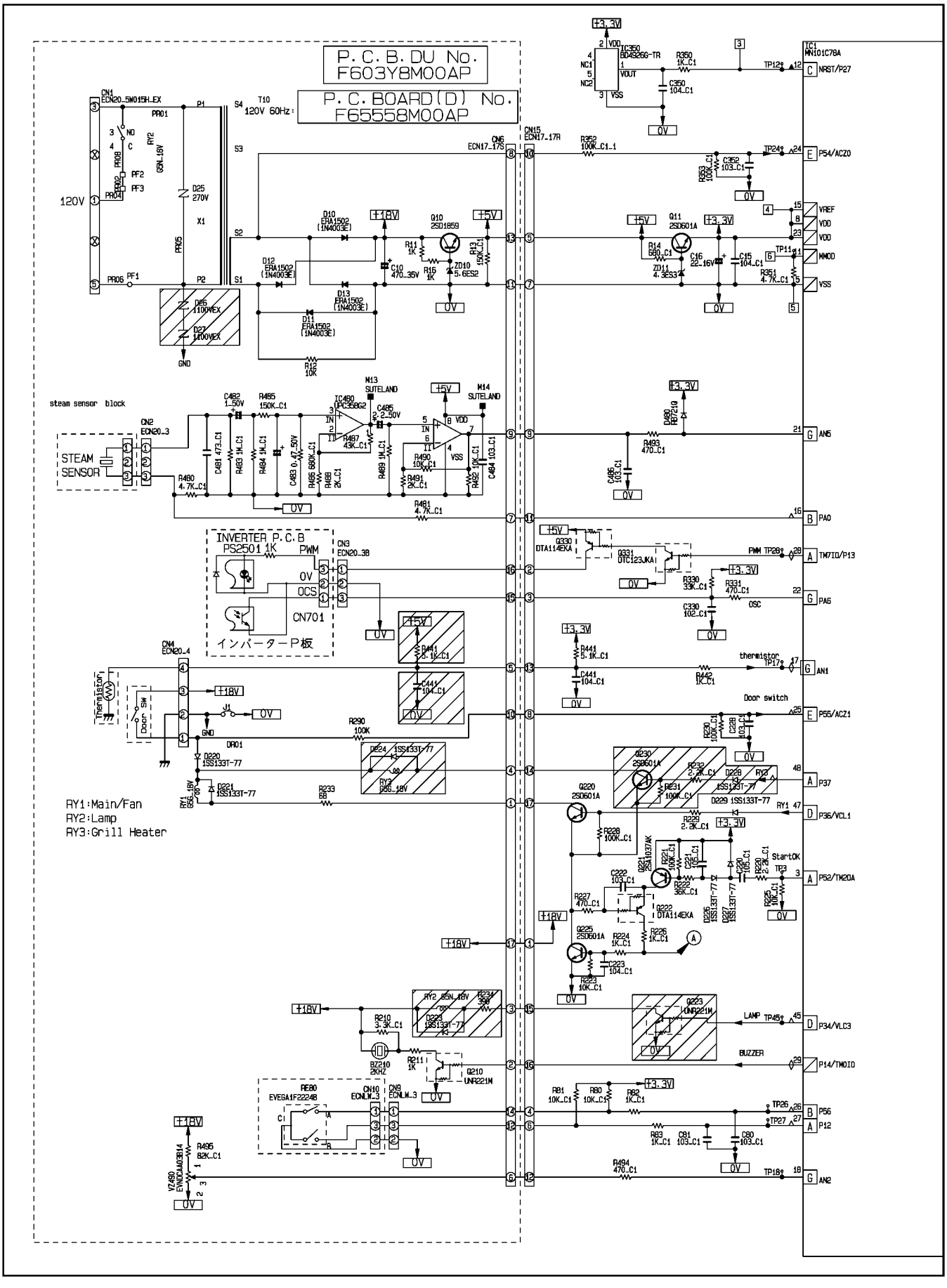
7.6. PACKING AND ACCESSORIES

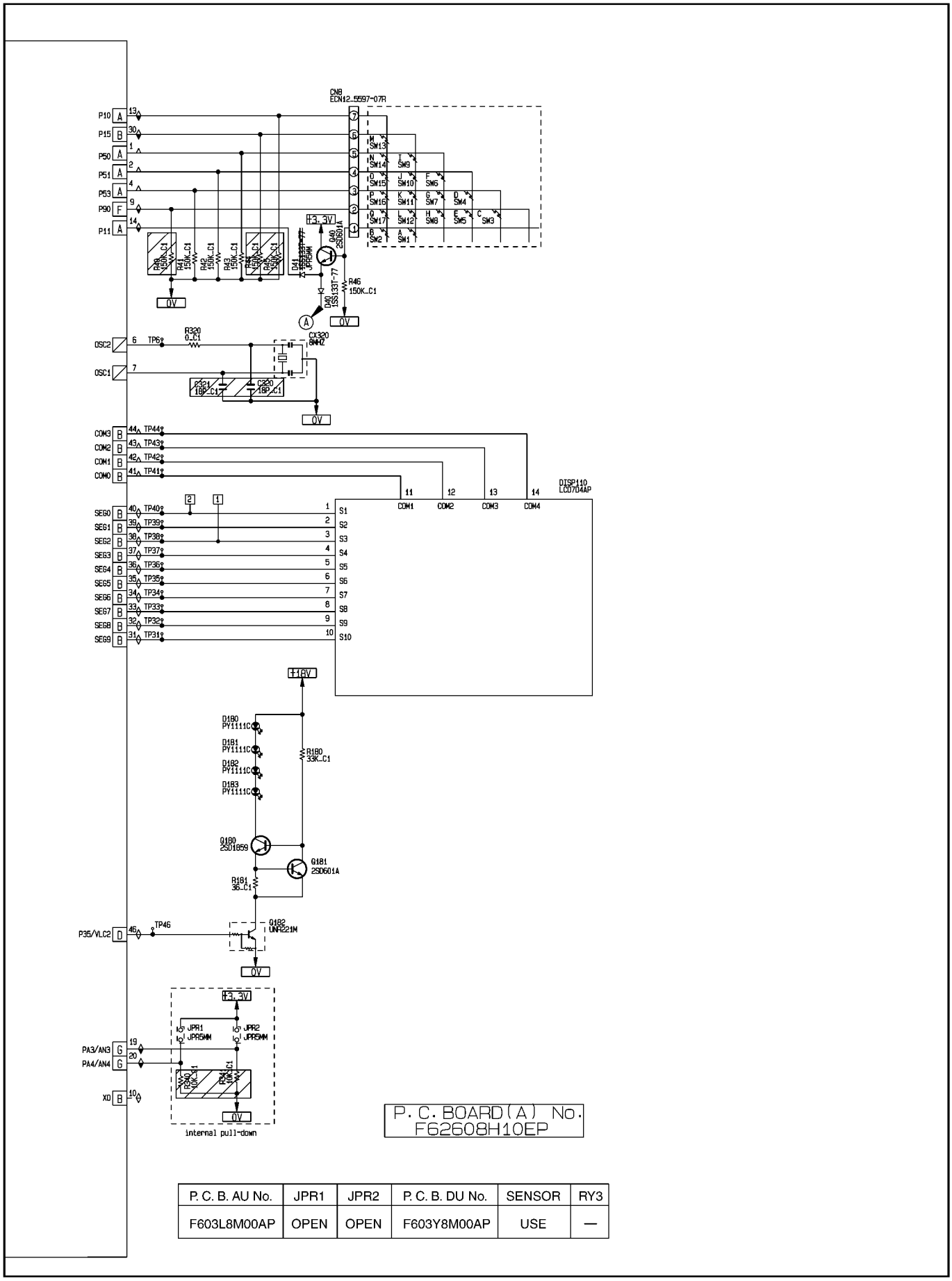


Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
P1		F00038M00AP	INSTRUCTION MANUAL	1	SD697S APH
P1		F00038M10CP	INSTRUCTION MANUAL	1	SD697S CPH
P1		F00038M30AP	INSTRUCTION MANUAL	1	SD667S APH
P1		F00038M80AP	INSTRUCTION MANUAL	1	SN677S APH,SN667B/W/BB/WB/MB APH
P1		F00038M60CP	INSTRUCTION MANUAL	1	SN677B/W CPH
P1		F00038M40AP	INSTRUCTION MANUAL	1	SN657S APH
P1		F00038N20AP	INSTRUCTION MANUAL	1	SA647B/W APH
P1		F00038R10RP	INSTRUCTION MANUAL	1	ST677S RPH/RTH,ST657W RPH/RTH
P2		F01028M00SAP	PACKING CASE,PAPER	1	SD697S APH
P2		F01028L70SCP	PACKING CASE,PAPER	1	SD677S CPH
P2		F01028M30SAP	PACKING CASE,PAPER	1	SD667S APH
P2		F01028M50SAP	PACKING CASE,PAPER	1	SN677S APH
P2		F01028M60BAP	PACKING CASE,PAPER	1	SN667B/BB APH
P2		F01028M60HAP	PACKING CASE,PAPER	1	SN667W/WB APH
P2		F01028M60SAP	PACKING CASE,PAPER	1	SN667MB APH
P2		F01028M60BCP	PACKING CASE,PAPER	1	SN667B CPH
P2		F01028M60HCP	PACKING CASE,PAPER	1	SN667W CPH
P2		F01028M70SAP	PACKING CASE,PAPER	1	SN657S APH
P2		F01028R10SRP	PACKING CASE,PAPER	1	ST677S RPH
P2		F01028R20SRP	PACKING CASE,PAPER	1	ST677S RTH
P2		F01028R30HRP	PACKING CASE,PAPER	1	ST657W RPH
P2		F01028R40HRP	PACKING CASE,PAPER	1	ST657W RTH
P2		F01028M90BAP	PACKING CASE,PAPER	1	SA647B APH
P2		F01028M90HAP	PACKING CASE,PAPER	1	SA647W APH
P3		F01046K50AP	UPPER FILLER	1	
P4		F01055L00AP	LOWER FILLER	1	
P5		F01067F00AP	P.E.BAG	1	SD697S APH,SD677S CPH,SD667S APH,SN677S APH, SN667B/BB/MB APH,SN667B CPH,SN657S APH, SA647B APH,ST677S RPH/RTH
P5		F01068100XN	P.E.BAG	1	SN667W/WB APH,SN667W CPH,SA647W APH, ST657W RPH/RTH
P6		F01078J00XN	DOOR SHEET	1	
P8		F06014T00AP	COOKING TRAY	1	
P9		F01924T00AP	SHEET	1	EXCEPT SD677S CPH
P10		F00065G40AP	CAUTION LABEL	1	APH,RPH,RTH
P11		F04458L70SCP	OVERLAY	1	SD677S CPH
P11		F04458M60BCP	OVERLAY	1	SN667B CPH
P11		F04458M60HCP	OVERLAY	1	SN667W CPH
P12		F04317D00CP	INSTALLATION INSTRUCTION	1	CPH

8 DIGITAL PROGRAMMER CIRCUIT

8.1. NN-SD697S APH

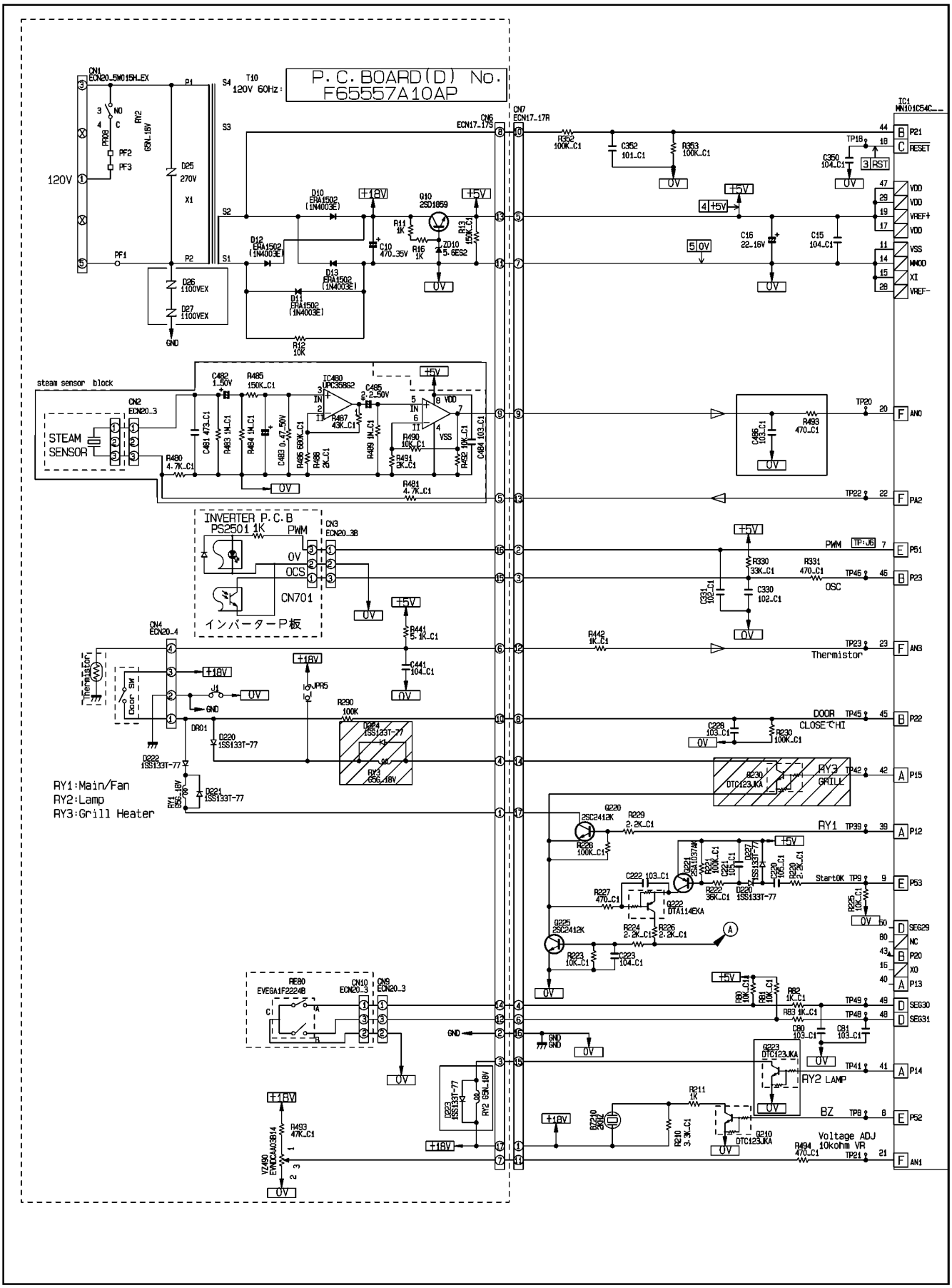


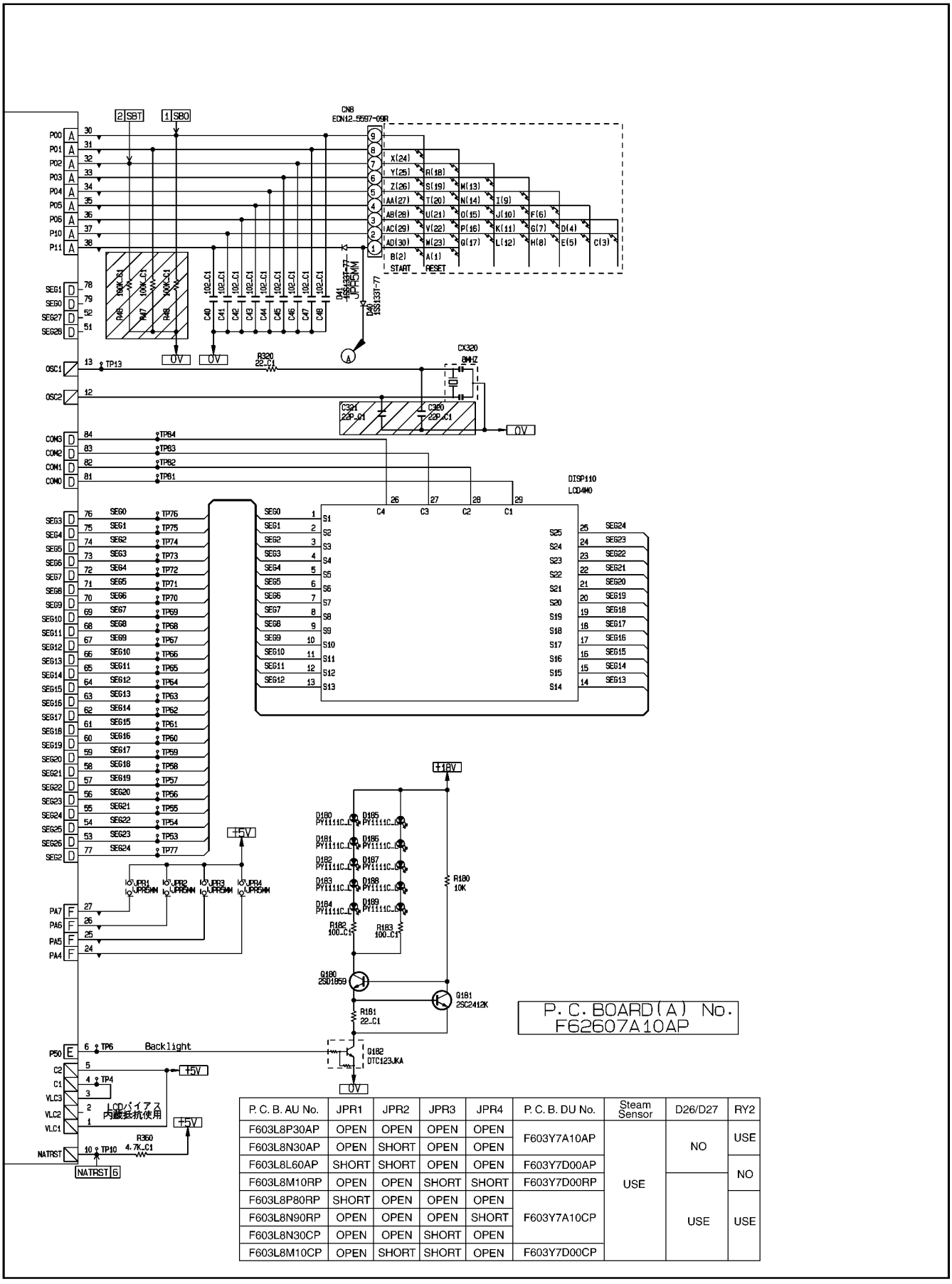


P. C. BOARD(A) No.
F62608H10EP

P. C. B. AU No.	JPR1	JPR2	P. C. B. DU No.	SENSOR	RY3
F603L8M00AP	OPEN	OPEN	F603Y8M00AP	USE	—

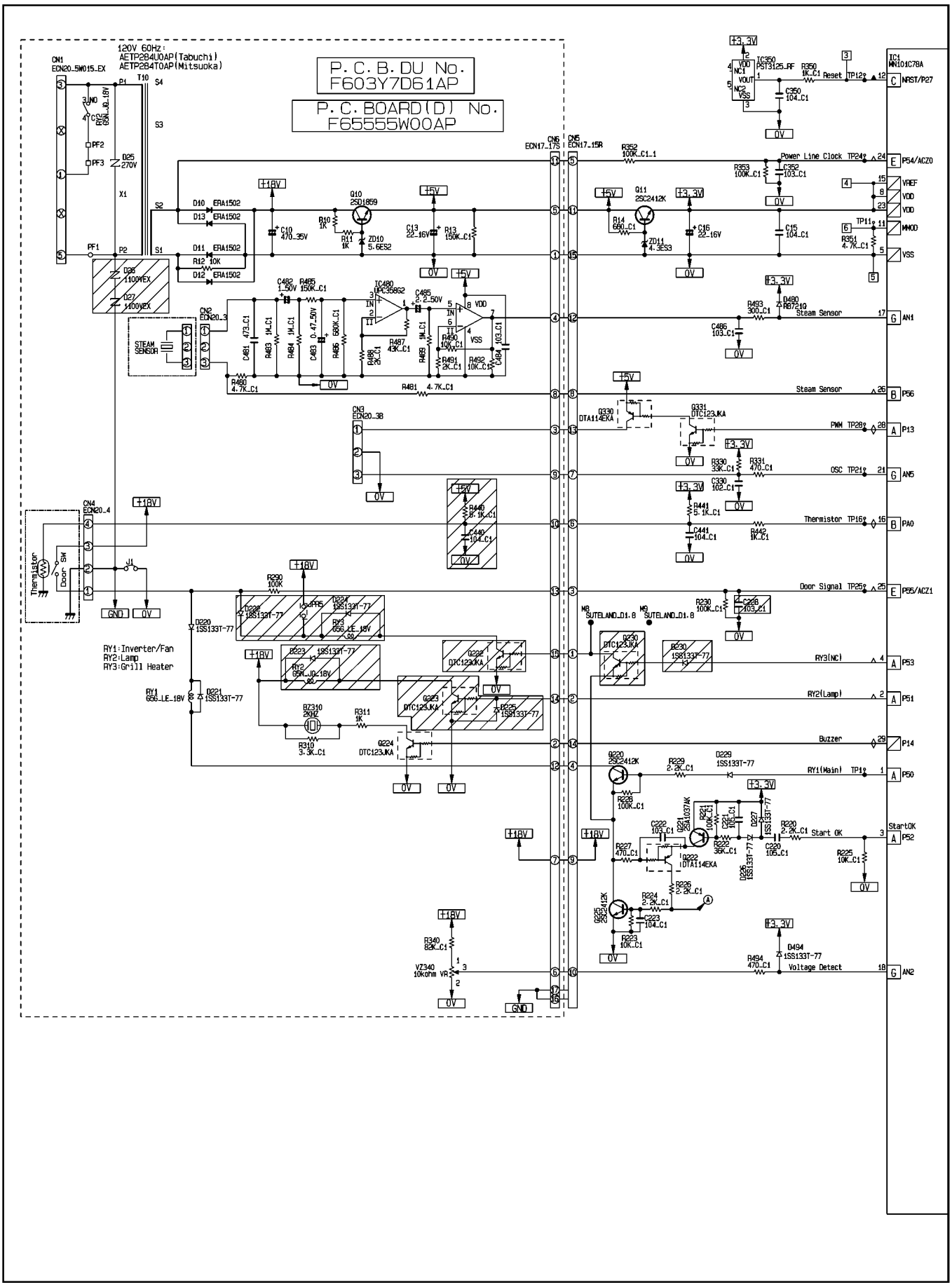
8.2. NN-SD677S CPH, SD667S APH

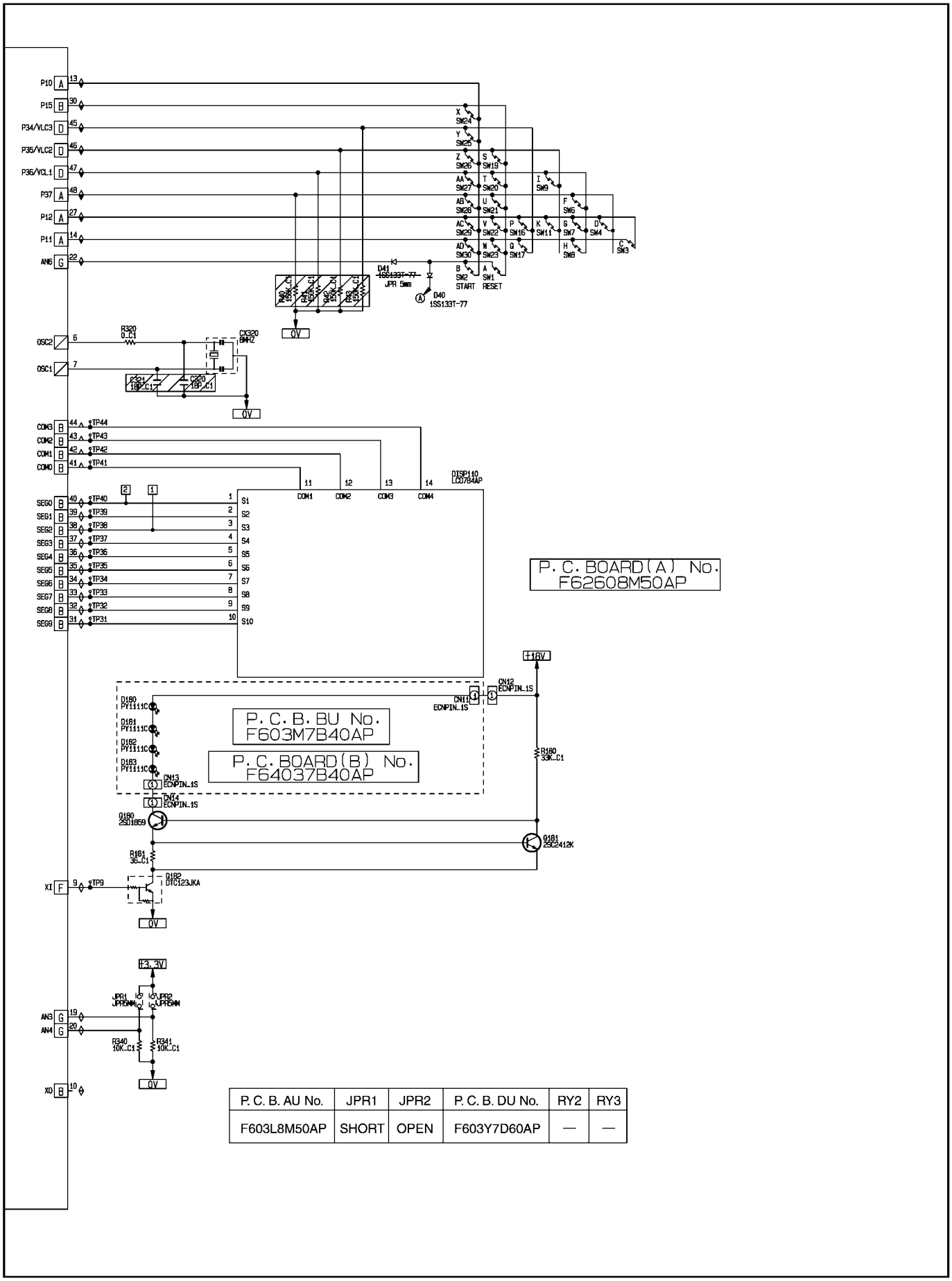




P. C. B. AU No.	JPR1	JPR2	JPR3	JPR4	P. C. B. DU No.	Steam Sensor	D26/D27	RY2
F603L8P30AP	OPEN	OPEN	OPEN	OPEN	F603Y7A10AP	USE	NO	USE
F603L8N30AP	OPEN	SHORT	OPEN	OPEN				
F603L8L60AP	SHORT	SHORT	OPEN	OPEN	F603Y7D00AP			NO
F603L8M10RP	OPEN	OPEN	SHORT	SHORT	F603Y7D00RP			
F603L8P80RP	SHORT	OPEN	OPEN	OPEN	F603Y7A10CP		USE	USE
F603L8N90RP	OPEN	OPEN	OPEN	SHORT				
F603L8N30CP	OPEN	OPEN	SHORT	OPEN				
F603L8M10CP	OPEN	SHORT	SHORT	OPEN	F603Y7D00CP			

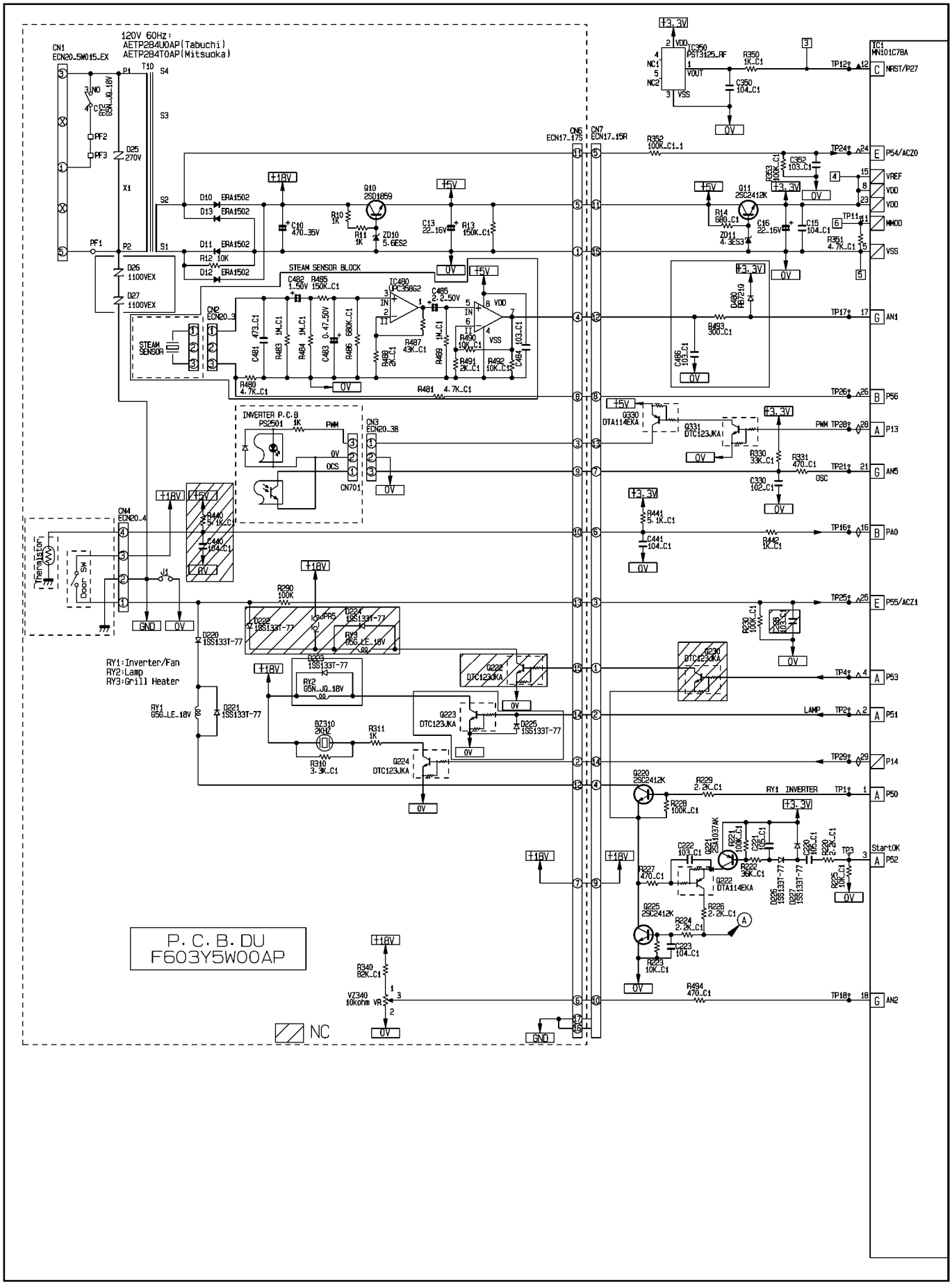
8.3. NN-SN677S APH

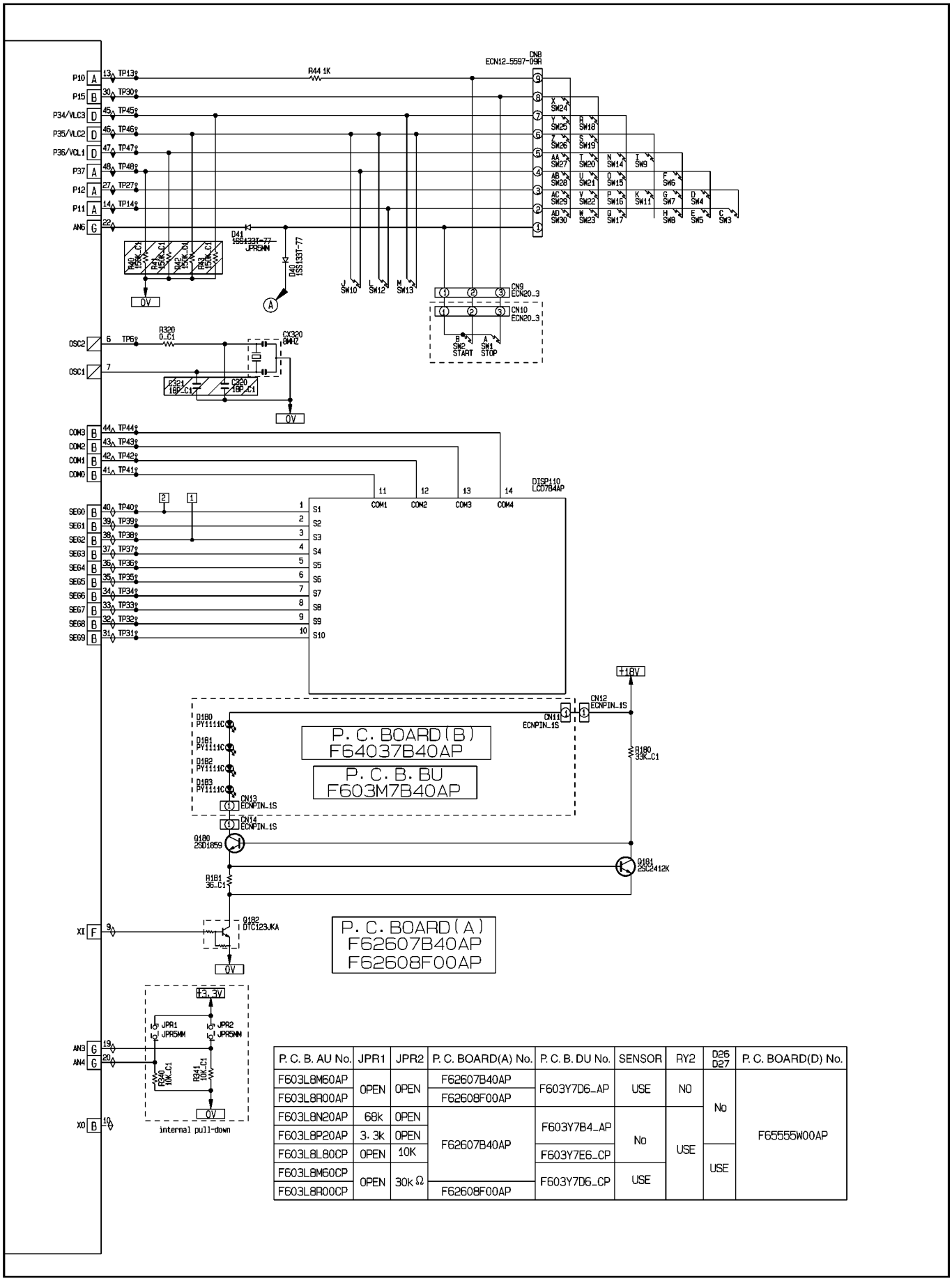




P. C. B. AU No.	JPR1	JPR2	P. C. B. DU No.	RY2	RY3
F603L8M50AP	SHORT	OPEN	F603Y7D60AP	—	—

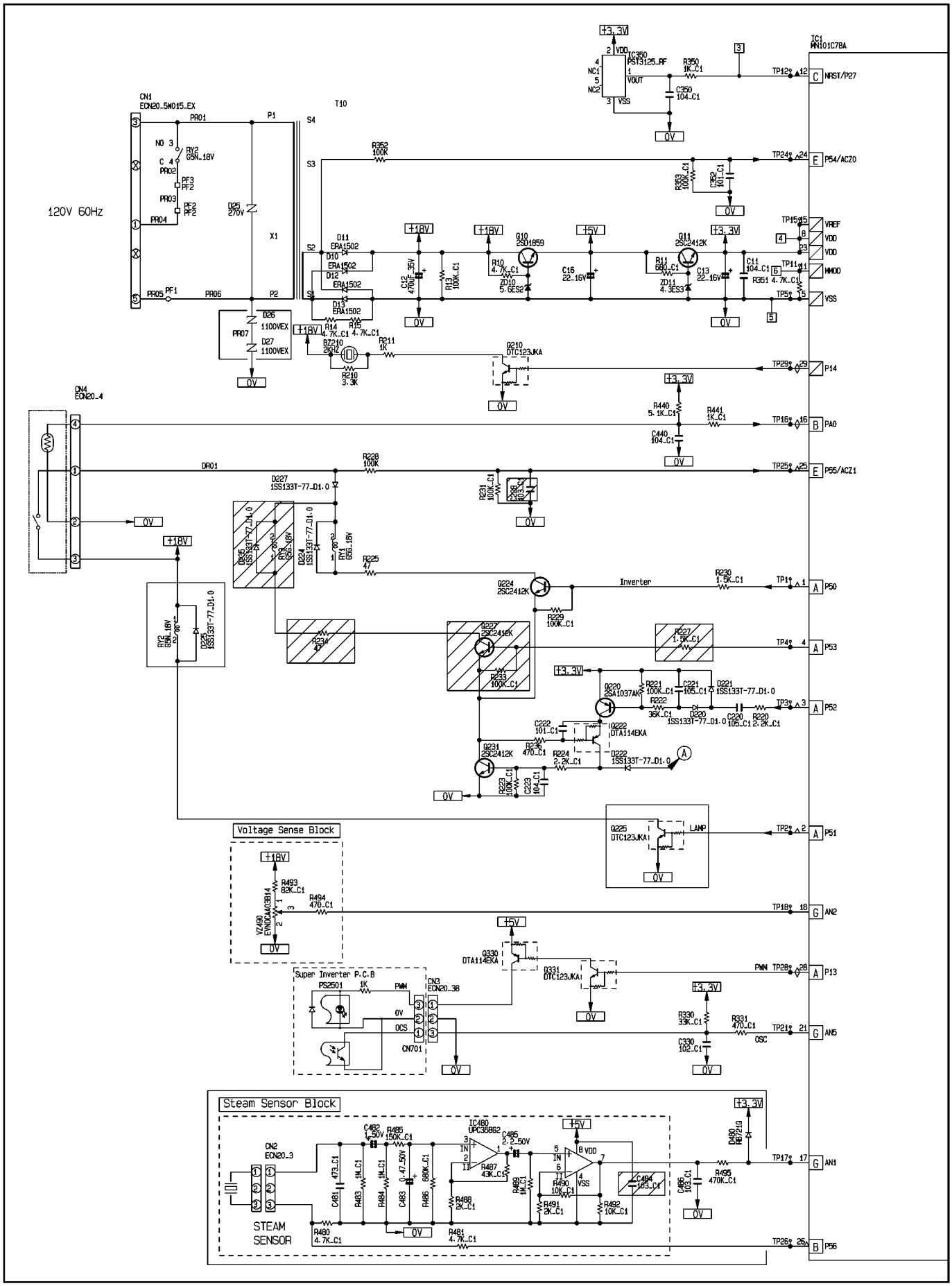
8.4. NN-SN667B/W/BB/WB/MB APH, SN667B/W CPH

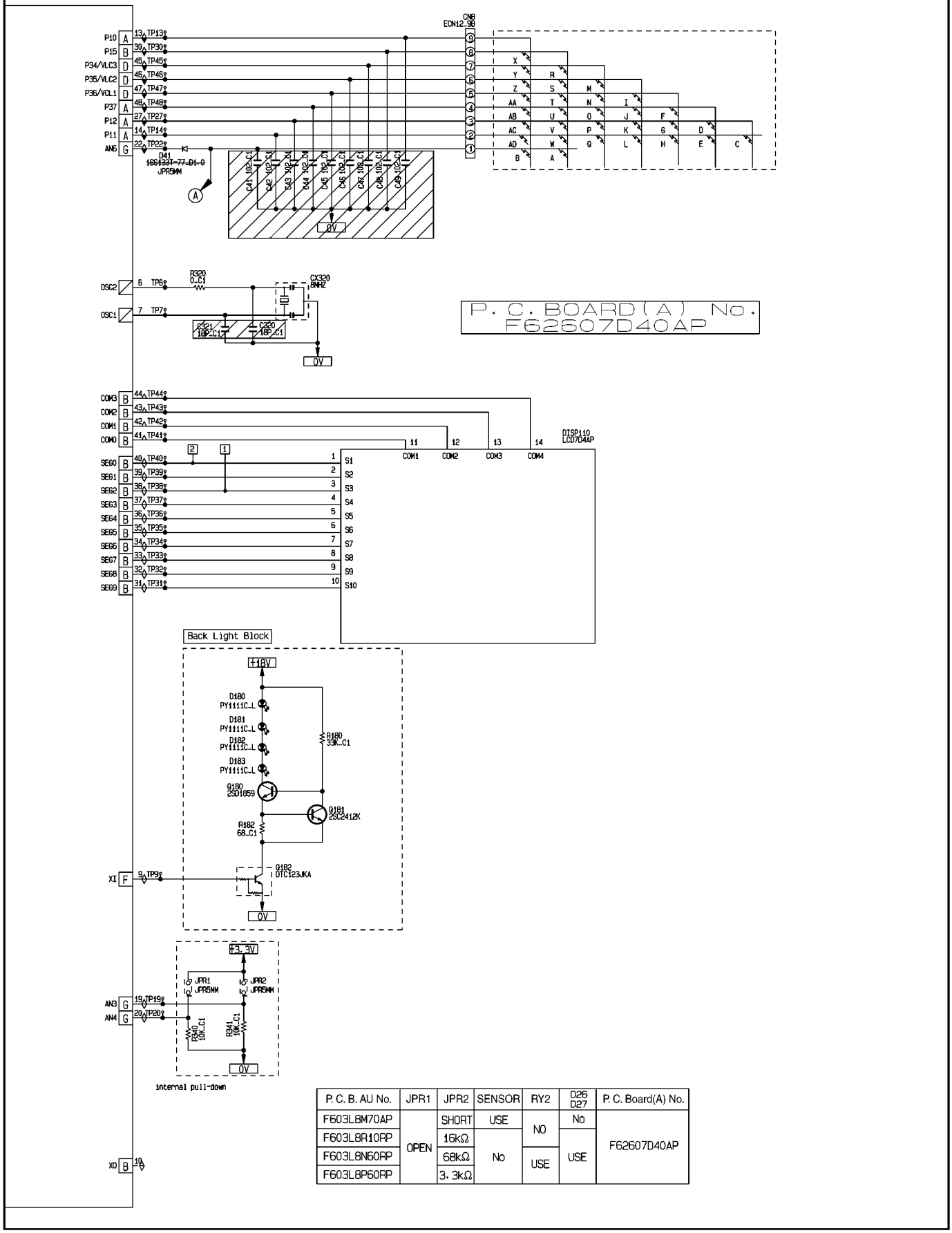




P. C. B. AU No.	JPR1	JPR2	P. C. BOARD(A) No.	P. C. B. DU No.	SENSOR	RY2	D26 D27	P. C. BOARD(D) No.
F603L8M60AP	OPEN	OPEN	F62607B40AP	F603Y7D6_AP	USE	NO	No	F65555W00AP
F603L8R00AP			F62608F00AP					
F603L8N20AP	68k	OPEN	F62607B40AP	F603Y7B4_AP	No	USE		
F603L8P20AP	3.3k	OPEN						
F603L8L80CP	OPEN	10K		F603Y7E6_CP			USE	
F603L8M60CP	OPEN	30k Ω		F603Y7D6_CP	USE			
F603L8R00CP			F62608F00AP					

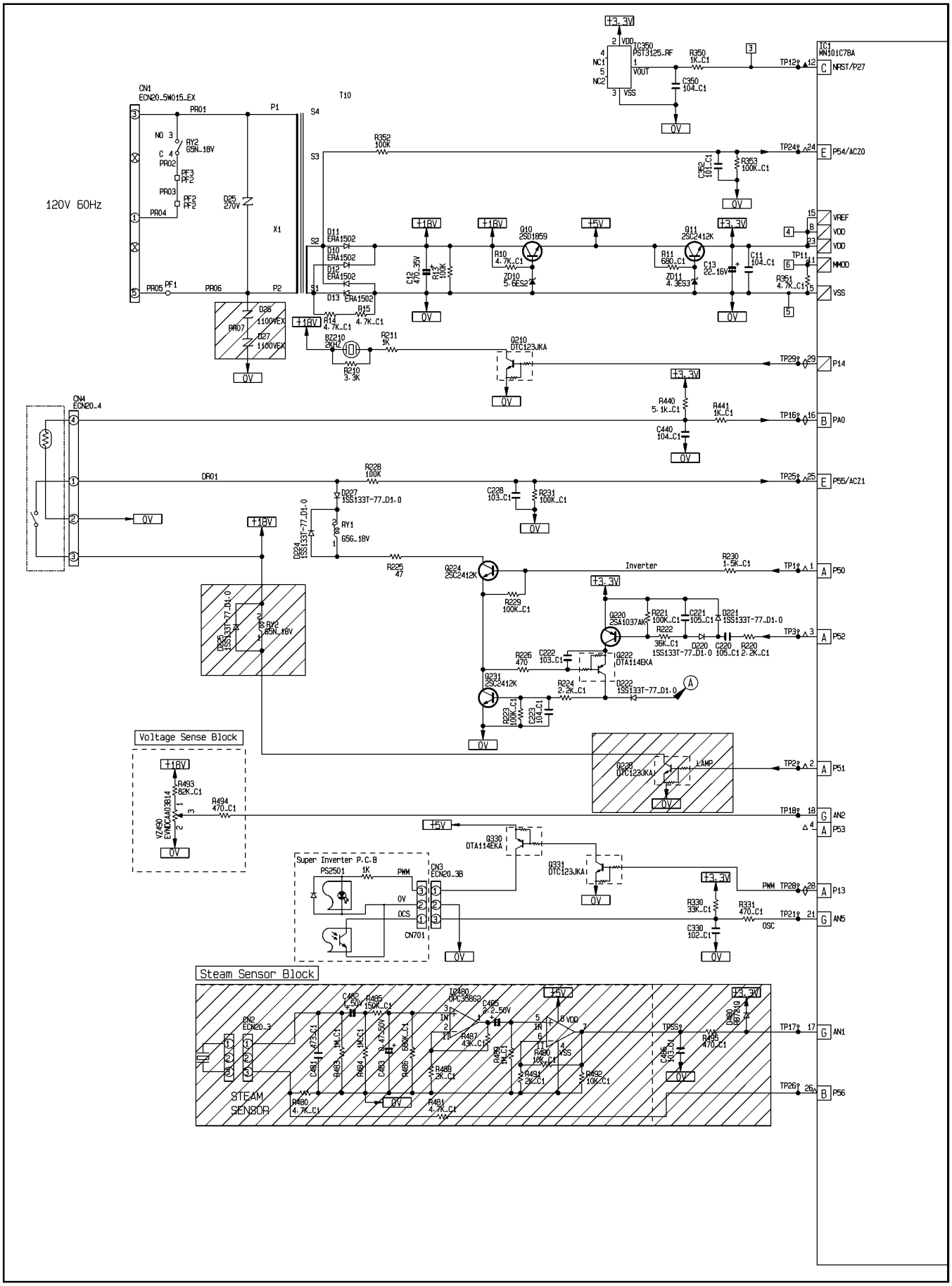
8.5. NN-SN657S APH, ST677S RPH/RTH, ST657W RPH/RTH

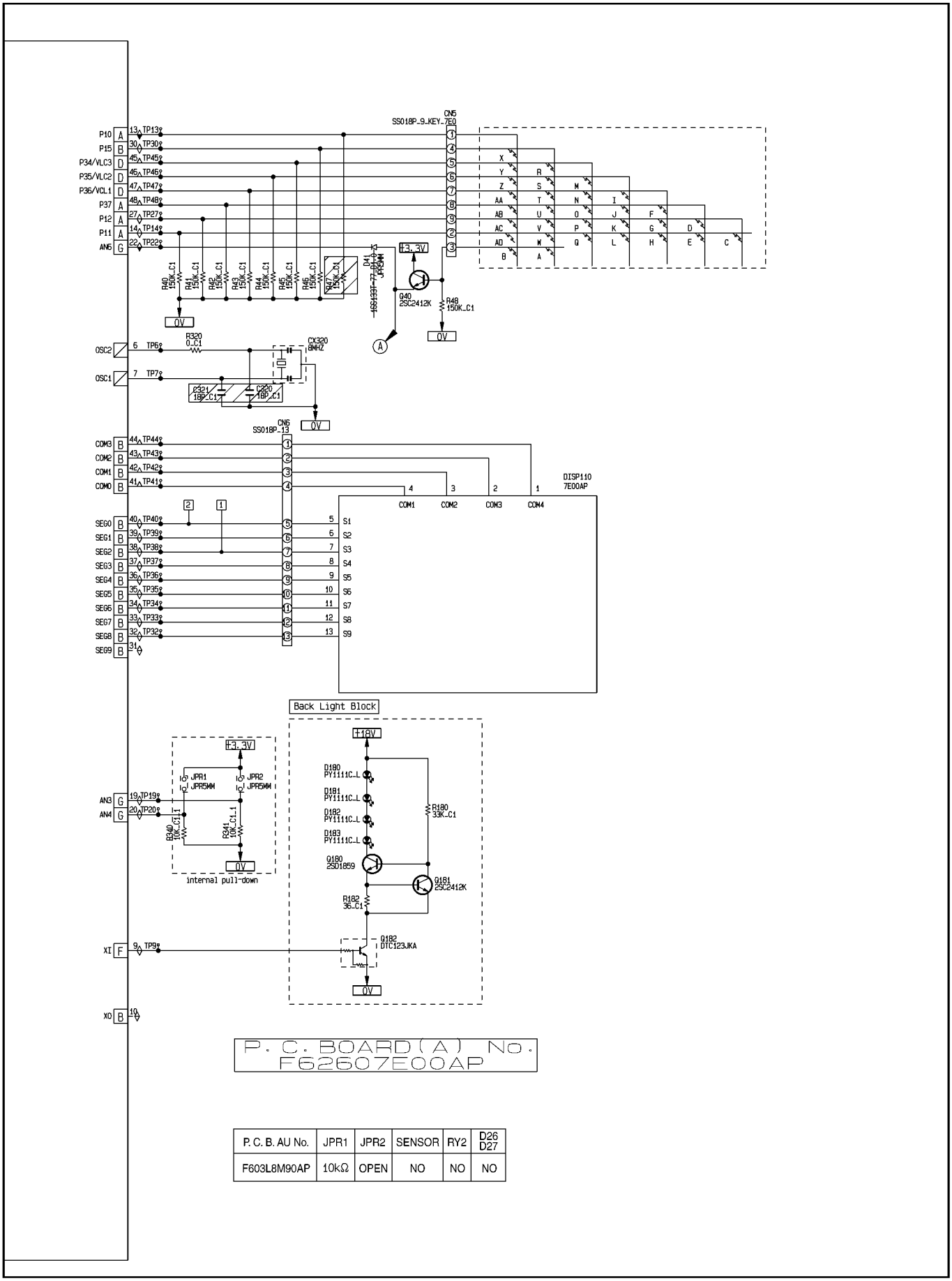




P. C. B. AU No.	JPR1	JPR2	SENSOR	RY2	D26 D27	P. C. Board(A) No.
F603L8M70AP	OPEN	SHORT	USE	NO	No	F62607D40AP
F603L8R10RP		16kΩ	No		USE	
F603L8N60RP		68kΩ		USE		
F603L8P60RP		3.3kΩ				

8.6. NN-SA647B/W APH





P. C. BOARD (A) No.
F62607E00AP

P. C. B. AU No.	JPR1	JPR2	SENSOR	RY2	D26 D27
F603L8M90AP	10kΩ	OPEN	NO	NO	NO

8.7. PARTS LIST

8.7.1. NN-SD697S APH

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
BZ210		L0DDEA000014	BUZZER	1	2.0KHz
C10		AECETK1V471B	AL CHEM CAPACITOR	1	470µF/35V
C16		AECETS1C220B	AL CHEM CAPACITOR	1	22µF/16V
C482		AECETS1H010B	AL CHEM CAPACITOR	1	1µF/50V
C483		AECETS1HR47B	AL CHEM CAPACITOR	1	0.47µF/50V
C485		AECETS1H2R2B	AL CHEM CAPACITOR	1	2.2µF/16V
CX320		EFOEC8004A4	CERAMIC RESONATOR	1	8.0MHz
DISP110		L5AAAEC00057	LCD	1	
DISP HOLDER		F66174U20AP	LCD HOLDER	1	
D40,D220,D221,D226,D227,D229		MA2C19600E	DIODE	6	
D10-D13		B0EAKT000025	DIODE	4	
D480		MA2C700A0F	DIODE	1	
IC1		MN101C78ADZ	L.S.I.	1	
IC350		C0EBE0000401	IC	1	
IC480		C0ABBA000230	IC	1	
Q10,Q180		B1BAAJ000003	TRANSISTOR	2	
D25		D4EAY271A036	ZENER RESISTOR	1	270V
RY1		K6B1AZA00005	POWER RELAY	1	
T10		G4C2AAD00005	LOW VOLTAGE TRANSFORMER	1	120V
VZ490		D3CA6103A017	VARISTOR	1	10KΩ
RE80		EVEJ1HF2224B	REVOLVING ENCODER	1	
ZD10		B0BA5R600016	ZENER DIODE	1	
ZD11		B0BA4R400002	ZENER DIODE	1	

8.7.2. NN-SD677S CPH, SD667S APH

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
BZ210		L0DDEA000014	BUZZER	1	2.0KHz
C10		AECETK1V471B	AL CHEM CAPACITOR	1	470µF/35V
C16		AECETS1C220B	AL CHEM CAPACITOR	1	22µF/16V
C482		AECETS1H010B	AL CHEM CAPACITOR	1	1µF/50V
C483		AECETS1HR47B	AL CHEM CAPACITOR	1	0.47µF/50V
C485		AECETS1H2R2B	AL CHEM CAPACITOR	1	2.2µF/16V
CX320		EFOEC8004A4	CERAMIC RESONATOR	1	8.0MHz
DISP110		L5AAAFD00019	LCD	1	
DISP HOLDER		F66175E40XN	LCD HOLDER	1	
		F67525E40XN	DIFFUSION SHEET	1	
D10-D13		B0EAKT000025	DIODE	4	
D40,D220-D223,D227		MA2C19600E	DIODE	6	
IC1		MN101C54CHX	L.S.I.	1	
IC480		C0ABBA000230	IC	1	
Q10,Q180		B1BAAJ000003	TRANSISTOR	2	
D25		D4EAY271A036	ZENER RESISTOR	1	270V
D26,D27		D4EAY112A036	ZENER RESISTOR	2	1100V (SD677S CPH)
RY1		AEBGJQC25F18	POWER RELAY	1	
RY2		K6B1AZA00011	POWER RELAY	1	(SD677S CPH)
T10		G4C2AAD00006	LOW VOLTAGE TRANSFORMER	1	120V
VZ1		D3CA6103A017	VARISTOR	1	
RE80		EVEJ1HF2224B	REVOLVING ENCODER	1	
ZD10		B0BA5R600016	ZENER DIODE	1	

8.7.3. NN-SN677S APH, SN667B/W/BB/WB/MB APH, SN667B/W CPH

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
BZ310		L0DDEA000014	BUZZER	1	2.0KHz
C10		AECETK1V471B	AL CHEM CAPACITOR	1	470µF/35V
C13,C16		AECETS1C220B	AL CHEM CAPACITOR	2	22µF/16V
C482		AECETS1H010B	AL CHEM CAPACITOR	1	1µF/50V
C483		AECETS1HR47B	AL CHEM CAPACITOR	1	0.47µF/50V
C485		AECETS1H2R2B	AL CHEM CAPACITOR	1	2.2µF/16V
CX320		EFOEC8004A4	CERAMIC RESONATOR	1	8.0MHz
DISP110		L5AAAEC00061	LCD	1	
DISP HOLDER		F66177D60AP	LCD HOLDER	1	
D40,D220,D221,D225,D227		MA2C19600E	DIODE	5	
D226,D229,D494		MA2C19600E	DIODE	3	(SN677S APH)
D223		MA2C19600E	DIODE	1	(SN667B/W CPH)
D10-D13		B0EAKT000025	DIODE	4	
D480		MA2C700A0F	DIODE	1	
IC1		MN101C78AEC	L.S.I.	1	
IC350		C0EBE0000401	IC	1	
IC480		C0ABBA000230	IC	1	
Q10,Q180		B1BAAJ000003	TRANSISTOR	2	
D25		D4EAY271A036	ZENER RESISTOR	1	270V
D26,D27		D4EAY112A036	ZENER RESISTOR	2	1100V (SN667B/W CPH)
RY1		AEBGJQC25F18	POWER RELAY	1	
RY2		K6B1AZA00011	POWER RELAY	1	(SN667B/W CPH)
T10		G4C2AAD00005	LOW VOLTAGE TRANSFORMER	1	120V
VZ340		D3CA6103A017	VARISTOR	1	10KΩ
SW1-SW4,SW6-SW9,SW11,SW16,SW17, SW19-SW30		EVQ11L05R	SWITCH	23	(SN677S APH)
SW1,SW2,SW10,SW12,SW13		EVQ11L05R	SWITCH	5	(SN667B/W/BB/WB/MB APH,SN667B/W CPH)
ZD10		B0BA5R600016	ZENER DIODE	1	
ZD11		B0BA4R400002	ZENER DIODE	1	

8.7.4. NN-SN657S APH, ST677S RPH/RTH, ST657W RPH/RTH

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
BZ210		L0DDEA000014	BUZZER	1	2.0KHz
C12		AECETK1V471B	AL CHEM CAPACITOR	1	470µF/35V
C13		AECETS1C220B	AL CHEM CAPACITOR	1	22µF/16V
C16		AECETS1C220B	AL CHEM CAPACITOR	1	22µF/16V (EXCEPT SA647B/W APH)
C482		AECETS1H010B	AL CHEM CAPACITOR	1	1µF/50V (SN657S APH)
C483		AECETS1HR47B	AL CHEM CAPACITOR	1	0.47µF/50V (SN657S APH)
C485		AECETS1H2R2B	AL CHEM CAPACITOR	1	2.2µF/16V (SN657S APH)
CX320		EFOEC8004A4	CERAMIC RESONATOR	1	8.0MHz
DISP110		L5AAAEC00057	LCD	1	(EXCEPT SA647B/W APH)
DISP HOLDER		F66174U20AP	LCD HOLDER	1	(EXCEPT SA647B/W APH)
D220,D221,D222,D224,D227		MA2C19600E	DIODE	5	
D10-D13		B0EAKT000025	DIODE	4	
D480		MA2C700A0F	DIODE	1	(SN657S APH)
IC1		MN101C78AEC	L.S.I.	1	
IC350		C0EBE0000401	IC	1	
IC480		C0ABBA000230	IC	1	(SN657S APH)
Q10,Q180		B1BAAJ000003	TRANSISTOR	2	
D25		D4EAY271A036	ZENER RESISTOR	1	270V
D26,D27		D4EAY112A036	ZENER RESISTOR	2	1100V (EXCEPT SN657S APH)
RY1		AEBGJQC25F18	POWER RELAY	1	
T10		G4C2AAD00006	LOW VOLTAGE TRANSFORMER	1	120V
VZ490		D3CA6103A017	VARISTOR	1	10KΩ
ZD10		B0BA5R600016	ZENER DIODE	1	
ZD11		B0BA4R400002	ZENER DIODE	1	

01/07
S-8L7, S-8M0
S-8M3, S-8M5
S-8M6, S-8M7
S-8M9, S-8R1
S-8R2, S-8R3
S-8R4
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